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CONTENTS

Methodical jacket crown preparation—Walton 1
Operative dentistry and periodontal disease—Mosteller 6
Periodontal benefits of well-planned diets—Radusch 14
Effects of diameter of nylon bristles—Phillips 20
Integration in treatment: cleft lip and palate—Cooper 27
Statutory curbs on laboratory advertising—Conway 33

PRELIMINARY PROGRAM

Official call 52
Directory 58
Essay program 60
Clinics 64
Scientific exhibits 70
Motion pictures 72
Technical exhibitors 73
Meetings 76
Social events 79
Members of House of Delegates 81

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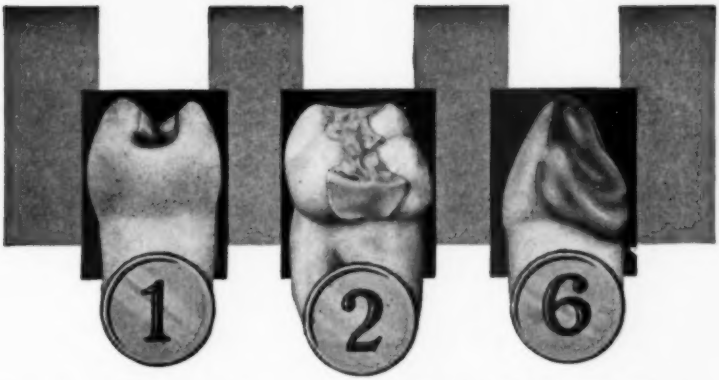

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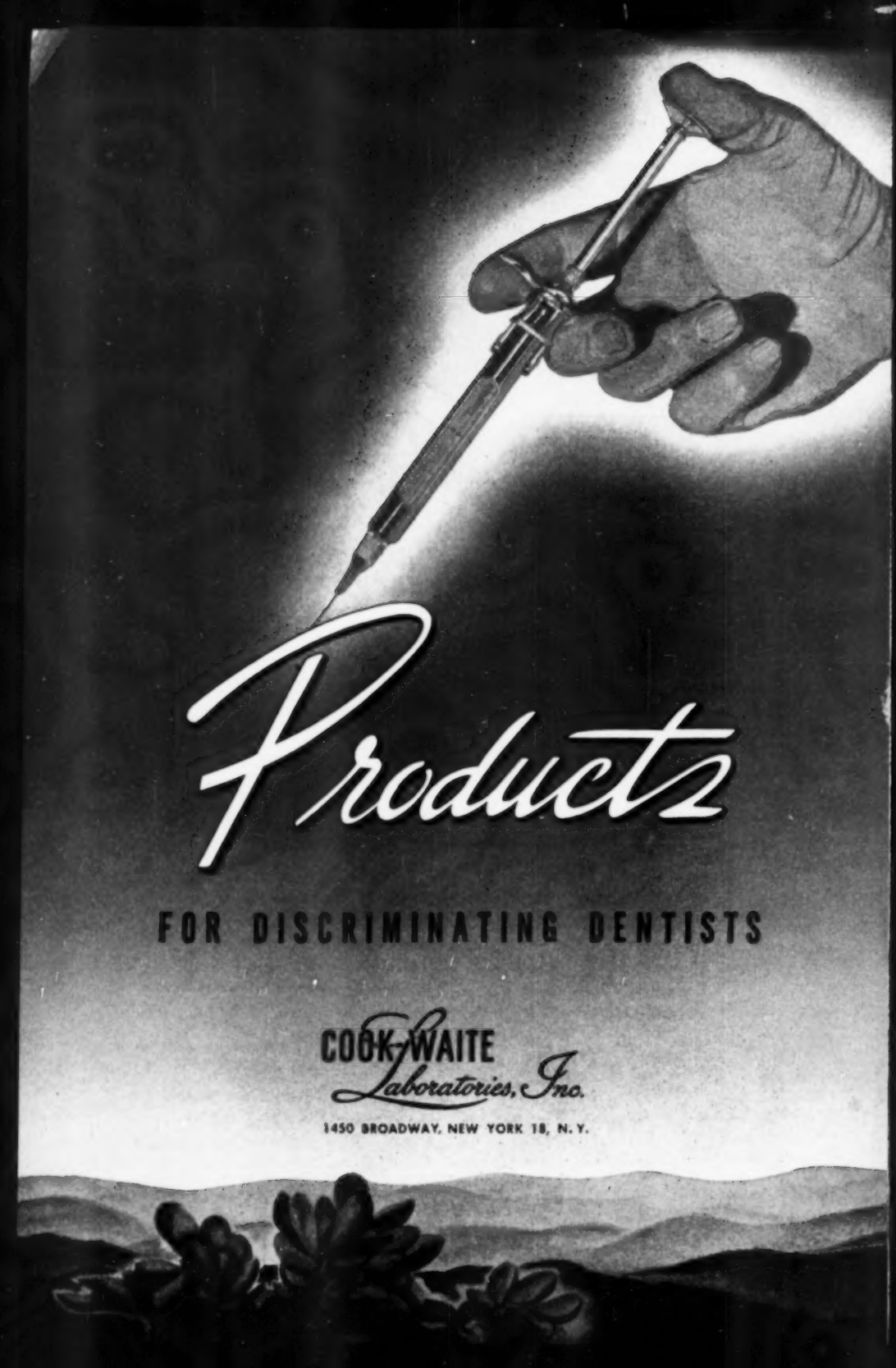
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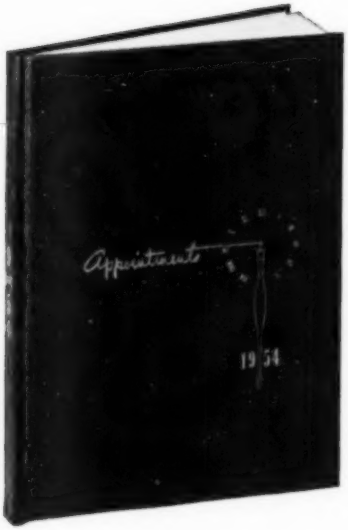

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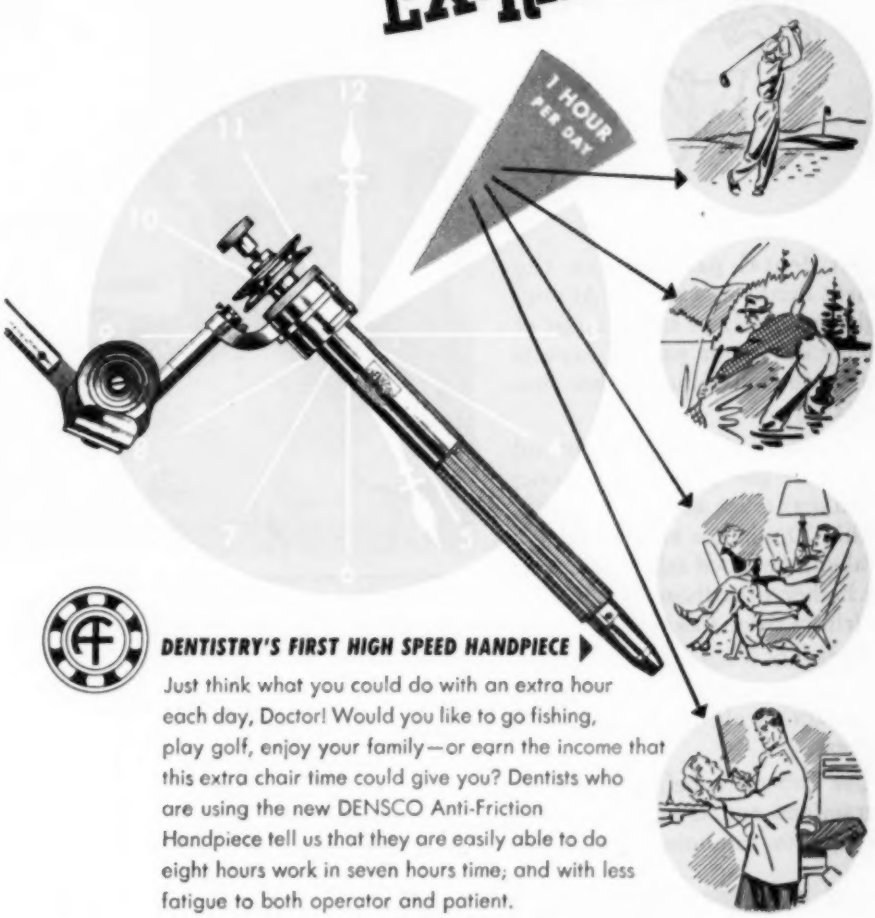

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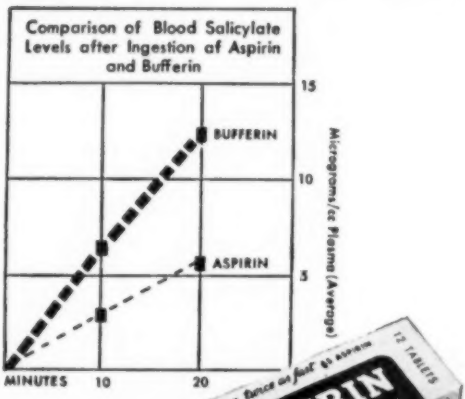

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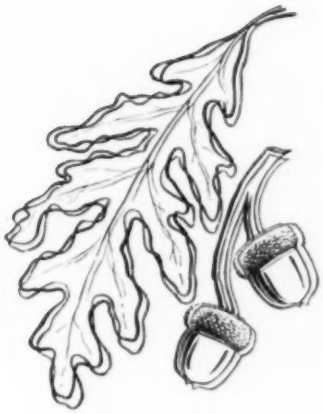

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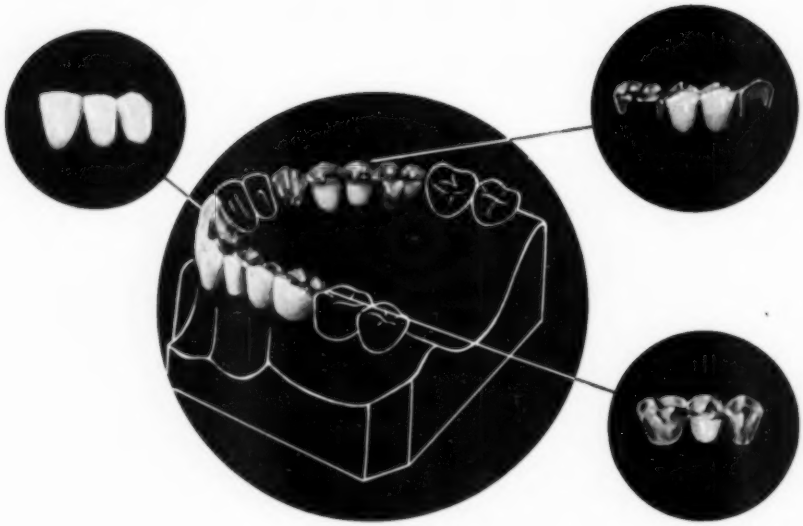

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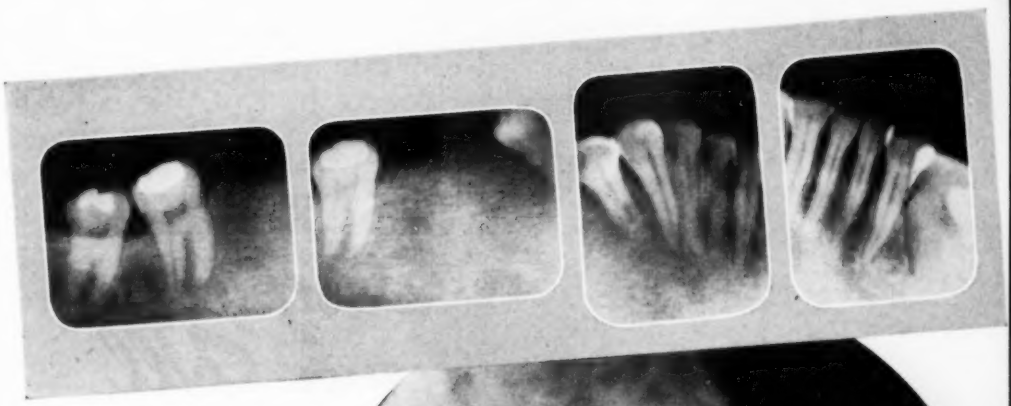

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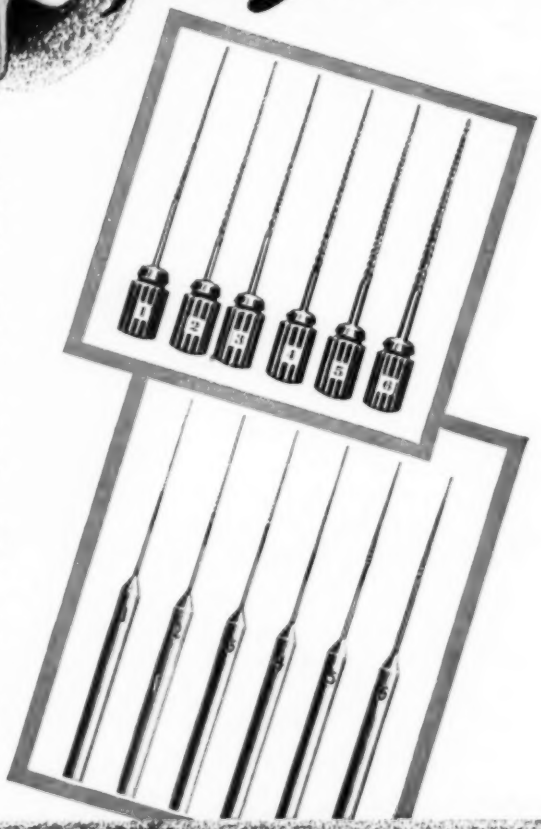

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JULY 1953 VOLUME 47 • NUMBER 1

THE JOURNAL OF THE AMERICAN DENTAL ASSOCIATION

Methodical jacket crown preparation

Charles B. Walton, D.D.S., Pittsburgh

The preparation of a vital tooth for a jacket crown is the most radical operation that a tooth must undergo and yet remain vital. At best it is a traumatic experience for the tooth and for the patient. The purpose of this paper is to suggest some details that will reduce the physical trauma to the tooth and the psychological trauma to the patient. Its aim, also, is to aid the dentist; to suggest ways to increase his skill and efficiency, to reduce his operating time, and thus to minimize his fatigue.

Preliminary treatment of the patient is important. A clinical examination, with accurate roentgenograms and study casts, should precede any mouth rehabilitation. Before reconstruction, if there is any evidence of gingival inflammation, a thorough prophylaxis is necessary, and particular care must be taken to remove serumal calculus. It is imperative to produce normal gingival tissue tone and to promote the proper position of this tissue for the margins of the completed jacket crown.

Careful attention during this prophylactic treatment will help the operator to appraise the patient's emotional and pain reactions.

Examination of the patient's occlusion and, if necessary, grinding in the occlusion in order to coordinate it to the hinge-axis relation of the mandible are essential before any preparation of teeth is begun.[1] The prophylactic treatment and occlusal equilibration will establish the confidence of the patient and convince him of the dentist's interest in his oral health. He will then be better prepared emotionally to accept more radical operations.

If gross malalignment of anterior teeth must be corrected, it will be useful to cut preparations on a duplicate study cast of the mouth and make wax patterns of

Presented before the Section on Partial Prosthodontics, ninety-third annual session, American Dental Association, St. Louis, September 9, 1952.

Associate professor, head of ceramics department, Dental School, University of Pittsburgh.

1. Lauritzen, A. G. Function, prime object of restorative dentistry. J.A.D.A. 42:523 May 1951.

proposed crowns. The study cast enables the operator to develop a method for the preparatory work on the individual teeth and he also can visualize how the mouth may be expected to look when the work is completed. In addition, this cast may be shown to the patient so that he can better understand the proposed treatment. Figure 1 shows an example of a congenitally missing upper lateral incisor and hypoplastic enamel of the central incisors. Slightly narrow jackets are made for the central incisors so that a normal width lateral incisor may be supplied. These central incisors are cut for jackets on a study cast so that three teeth may be positioned normally.

METHODICAL TECHNIC

It is most important to establish a well organized method for jacket crown preparation. Such a preparation should be viewed as a surgical operation and be patterned after the surgeon's operating routine as much as possible. The equipment and instruments should be prepared and laid out beforehand and a step by step plan should be followed. Each cut on the tooth should be made in its planned sequence and each instrument should be used to complete a cut before it is discarded. If this idea is followed, certain benefits will accrue:

1. Needless pain and discomfort will be eliminated.
2. The pulp and gingiva will undergo less trauma.
3. A better preparation will result.
4. Operating time will be saved.

If the dentist follows an organized plan, his habits of work will be benefited and the patient will be impressed by the sureness and confidence of the operator.

PREPARATION OF TEETH

The excellent treatise by H. Conod[2] has been used as a guide to the preparation of teeth for jacket crowns. In his article Conod clearly illustrates the mechanical principles that are significant in the development of a proper tooth form so that the porcelain crown may be well supported by the preparation. He illustrates how the preparation can be made so that the porcelain will be subjected to compressive forces rather than to destructive tensile forces during mastication.

Enough time must be allotted to the patient so that the preparation may be completed, the impressions taken and the temporary crown placed at one appointment. Brecker[3] suggests that all preparatory cutting be done on any one tooth at the same appointment. This is sound practice because it prevents repeated irritation to the pulp and the periodontal tissues, and it certainly is much less objectionable to the patient. Usually one and a half hours is sufficient for the

2. Conod, H. Etude sur la statique de la couronne jaquette. Actualite Odontostomatologique, no. 14, 1951.
3. Brecker, S. C. The porcelain jacket crown. St. Louis, C. V. Mosby Co., 1951, p. 22.

Fig. 1 • Cast. Left: Preoperative labial view. Center: Teeth prepared. Right: Wax patterns of proposed restorations

completion of the afore-mentioned steps on a single tooth. Much less time, proportionately, will be required for the two adjoining teeth.

Routine presedation of the patient with a barbiturate of short duration, such as secobarbital sodium, ¾ grain or 1½ grains, will reduce apprehension and make the patient more cooperative. The depth of local anesthesia also will be enhanced.

The assistant should have the armamentarium and materials prepared beforehand so that they may be available quickly and without confusion. Her cooperation is important here and is invaluable during operating procedure.

Effective local anesthesia for so long a procedure may be obtained by the use of 4 per cent procaine hydrochloride with phenylephrine 1:2,500, or by 2 per cent lidocaine hydrochloride with epinephrine 1:100,000. Our experience has been satisfactory with these more potent anesthetics.

INSTRUMENTATION

The following method is suggested for the preparation of an upper incisor tooth in normal alignment.

Diamond disks and wheels are used to reduce the major bulk of the tooth. Tepid water is kept running over the instrument.

1. The outline of mesial and distal slices are pencilled. These are cut with a true-running ¾ inch or ⅞ inch flat diamond disk. Proximal shoulders are established with this instrument and the shoulders are carried through to the lingual angles.

2. The incisal angle is reduced with a ½ inch narrow diamond wheel, one half being reduced at a time. If the incisor is thin, it is not cut to the full depth until after the labial and lingual enamel is removed.

3. The important cuts are those which reduce the four proximal line angles and those which establish the shoulders at the proximolabial and proximolingual angles of the tooth. When there are two adjoining sound teeth, these cuts are made by a ¾ inch or ⅞ inch cup-shaped true diamond or vulcarbo disk. Considerable water is poured over it. The inner edge of the disk is used, beginning at the incisal edge and gradually cutting to the shoulder area, so that the proximal line angle of enamel may be removed easily without touching the approximating tooth. When use of this disk is mastered, these difficult line angles may be cut easily and the cutting of the shoulders at the angles begun. For use on these angles, the cup-shaped disk is preferable to the small diameter, cylinder cutter which is inefficient and which creates heat. Figure 2 illustrates the use of the cup-shaped disk. The object is to reduce the enamel with as large an abrasive instrument as can be used safely and one which can, at the same time, be used to begin the shoulders in these difficult areas. This means, naturally, that the finger rests and guards for teeth, lips and tongue must be especially good.

4. Next the shoulder is established (but not finished) around the entire tooth. A thin diamond wheel of about 2.5 mm. diameter cuts the labial shoulder to the dentin from the mesial to distal angles. Then it is used to make the lingual shoulder.

5. This same wheel is used to cut a median groove in the labial enamel to the incisal edge in order to establish the depth of labial enamel to be removed.

6. One half of the labial enamel is removed at a time with ½ inch or ⅝ inch diameter diamond wheel (Fig. 3, left). The cutting edge is held parallel to the axis of the tooth. This is followed by a ¼ inch diamond wheel held in the opposite direction (Fig. 3, right) to remove the remaining collar of enamel incisal to the shoulder groove.

7. The lingual enamel is removed by the ¼ inch diamond wheel, following the contour of the surface. This is finished

with a small barrel-shaped carborundum wheel to prevent the formation of sharp angles.

8. A Bastian shoulder cutting wheel is used (right-angle style held in the straight handpiece) to raise the shoulder beneath the free gingiva on the labial side.

9. A thin tapered cylinder mounted point with square end, preferably an extremely fine grit, is now used to hone all the axial walls, to reduce sharp axial angles and to straighten the shoulder.

10. A no. 600 plain fissure bur is then used to sharpen the shoulder after which it is filed with end-cutting Bastian files.

11. The preparation is polished with lubricated fine-grit paper disks.

IMPRESSION METHOD

On completion, the prepared tooth should be isolated and scrubbed carefully with some mild antiseptic and obtundent. The formula may be the one preferred by the University of Michigan (phenol, 1 part; creosote, 2 parts; eugenol, 3 parts), or it may be Black's 1-2-3 solution. The dentin is dried with cotton and two or three thin coats of copal varnish are applied. Desiccating agents such as alcohol or other volatile irritants should not be used for drying.

It has been found that while the tooth is free of saliva, the operator can fit the copper bands for the tube impressions most satisfactorily. Fairly tight, well annealed copper seamless bands are used. The bands are not selected for size until after the preparation because they are always found to be too large if selected before the shoulder cutting is complete. If the band is contoured to the gingival section of the tooth and is carried under the lingual shoulder first and gradually rotated forward, it will conform to the proximal surfaces easily. Scribing can be done in order to trim it to fit uniformly beneath the gingival tissue.

The festooned band is beveled on its outer gingival edge. The tube impression is taken in graphite-impregnated wax for an electro-formed copper die. This wax has a low fusing point and may be softened thoroughly in the band. The band is pressed to position with a minimum of pressure on the open end. Just enough pressure is created while seating the band so that it will hold the wax in the band. After the band is placed in its proper position, it may be held at that level by the fingers, and as cool water is dropped on it, heavier pressure is applied against the open end. The object is not to force the edges deeply into the periodontal attachment and to prevent excess impression material from extruding at the gingival edge. In this way, minimum irritation occurs.

For the transfer, or master impression, it is best to take a duplicate tube impression in low-fusing inlay wax and pinch the band so that the contacts of the adjoining teeth are established against the band. Plaster is the material preferred for the transfer impression so that the duplicate tube impression may be exactly positioned and the die may be pressed into it without fear of forcing it out of position.

TEMPORARY PROTECTION OF THE TOOTH

After impressions are complete, the tooth is again isolated and the sedative solution applied. A moderately stiff mix of zinc oxide and eugenol cement is spatulated into a small string of cotton fibers for a gingival pack. After the tooth is lubricated with petroleum jelly, this little rope is packed into the shoulder area against the gingival third of the cut dentin. Silicate that has been mixed on a cold slab is then molded over this to tooth form with plastic instruments. The silicate must not impinge against the gingival tissue and any existing impingement must be removed. In this manner

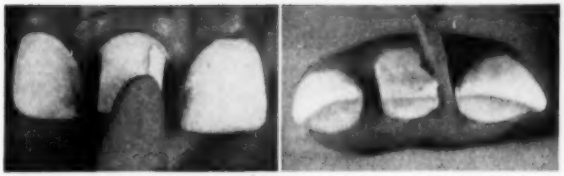

Fig. 2 • Reduction of proximal angles. Left: Labial view of cup-shaped disk cutting labioproximal angle. Right: Incisal view of disk

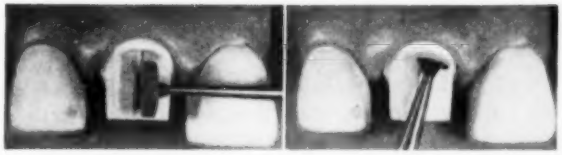

Fig. 3 • Reduction of labial surface. Large wheel used to reduce bulk. Right: Smaller wheel used to remove remaining collar of enamel

the tooth is carefully protected and no irritating edges are forced against the gingiva to injure it.

It is usual to allow several days to elapse before the jacket crown is cemented. This will help the pulp to recover from operative shock and the gingiva to be less irritated.

SUMMARY

During diagnosis and prophylactic treatment it is possible to estimate the temperament of the patient and to establish his confidence.

When repositioning of teeth is required, it is helpful to prepare the teeth on a duplicate study cast and build a "mock-up" in wax. This will clarify the method of procedure. The dentist then may cut the preparations with a definite and methodical plan in mind, working precisely and without confusion.

The larger abrasive instruments are used for the major enamel cutting. Each cut requiring a particular instrument should be completed before the next cut is begun. The use of concave disks to reduce the proximal angles and to cut the shoulders in these difficult angles will expedite and simplify the whole preparation. This also will eliminate the heat and trauma that can be produced so easily when cutting with small cylindrical instruments. The reduction of the shoulder subgingivally is done principally with wheel-shaped instruments, and the shoulder is merely sharpened and finished with steel burs. Sharp line angles and corners should be eliminated from the axial surfaces so that internal tensions are reduced in the porcelain crown.

Proper care of the cut dentin with a sedative cement pack and a temporary crown that does not impinge on the gingiva and is not in traumatic occlusion will eliminate most postoperative pain and sensitivity. The gingiva will be kept as nearly normal as possible so that cementation of the permanent jacket crown will be accomplished without the interference of serum or hemorrhage.

The relation between operative dentistry and periodontal disease

John H. Mosteller, D.D.S., Mobile, Ala.

The etiology of some instances of periodontal disease remains obscure. While it is recognized that nutritional deficiencies or hormonal imbalance or a combination of the two may cause periodontal disease in some individuals, a review of current literature[1] indicates that there is evidence these conditions play a part in the etiology of only a comparatively small number of cases with periodontal involvement, and that even in these instances they are a predisposing factor only. Periodontosis, in particular, has been vaguely linked with various systemic conditions by many writers, but little correlation has been demonstrated through accepted clinical and laboratory tests. Karshan[2] recently completed a comprehensive search for systemic disease relationship to periodontal disease in 175 patients who exhibited marginal periodontitis, periodontitis complex or periodontosis. His comparison of all the acknowledged laboratory tests as well as dietary charts and salivary analyses of this group with those of 51 control patients, free from periodontal infection, yielded essentially negative results.

Occlusal trauma unquestionably is a factor in the causation of many instances of periodontal disease and any dentist practicing periodontics should acquaint himself thoroughly with the technic of occlusal equilibration.[3] The removal of calculus deposits from the gingival sulci and the maintenance of this hygienic state are most important in the largest percentage of cases, and yet the question has not been completely answered as to why one individual's periodontal apparatus will require the most meticulous home care plus professional prophylactic treatment three or four times a year in order to remain healthy, while another's may remain free of periodontal infection with perfunctory oral hygiene. There is much about the individual as a biological entity that is not completely understood. Basic knowledge derived from research, however, and the refinement of technic by clinicians have diminished the cases which the periodontist cannot materially help to an encouraging number, provided treatment is begun early enough in the course of the disease, and provided the patient is cooperative.

Admittedly, the etiology of some cases of periodontal disease is not thoroughly comprehended. For this reason some dentists have been unjustly critical of the science of periodontics. One causative fac-

Presented before the Section on Operative Dentistry, combined with the Section on Periodontics, ninety-third annual session, American Dental Association, St. Louis, September 9, 1952.

1. Mosteller, J. H. Etiology of periodontal disease: a review of current literature. J. Periodont. 21:168 July 1950.

2. Karshan, Maxwell. Studies in etiology of periodontal disease. J. Periodont. 22:23 Jan. 1951.

3. Mosteller, J. H. Importance and technic of occlusal equilibration. Dental World 6:6 First Quarter 1951.

tor for periodontal disease, however, that is perhaps most constant in its destructive character in all mouths is one that is created by the very individuals who are supposedly dedicated to the conservation of human dentition. This factor is produced by the dentists themselves through errors in operative dentistry.

Authors of most texts[4-7] stress the importance of sound operative procedures in the maintenance of periodontal health, and other individuals[8-11] have contributed to the literature on the subject. Glickman[12] has rightfully criticized the curricula of most dental schools for failure to devote sufficient lecture and clinical time to periodontology. A survey by the American Academy of Periodontology[13] showed that only 15 of our 41 dental schools had a separate department of periodontics. Neglect of proper emphasis in dental schools undoubtedly has contributed to the indifference and even to the incompetence of many practitioners in the proper diagnosis and treatment of periodontal diseases. The principles and practices of operative dentistry, however, occupy the largest individual portion of all dental curricula; and, therefore, perfunctory operative procedures which do not fulfill the biologic requirements of the soft tissues of the mouth cannot be blamed on lack of training.

Notwithstanding this fact, clinical observation reveals all too frequently the damage to the periodontium caused by a faulty operative technic. The author made a full-mouth roentgenographic examination of 400 patients, ranging in age from 14 to 56 years, which revealed that almost a third had periodontal difficulties caused by poor restorative dentistry. Some of the younger patients had received no operative treatment, and when this group was eliminated the percentage of individuals with abused periodontal tissues was increased. Those patients in whose mouths the failure to replace lost teeth clearly contributed to their periodontal condition were not included since their problems were more related to prosthodontics.

The present discussion of the relation between operative dentistry and periodontal disease is divided into the consideration of three phases: preoperative, operative and postoperative procedures.

PREOPERATIVE PROCEDURES

Before any restorative work is started, it is always best to take sufficient roentgenograms and administer a good thorough oral prophylaxis. By sufficient roentgenograms, a full-mouth set for all new patients is meant, with bitewings at subsequent examinations, plus any other individual exposures warranted by the case at hand. Frequently restorations with overhanging gingival margins are allowed to remain for years as irritants to the periodontium, in spite of periodic dental examinations, because of the examining dentist's failure to detect their presence through roentgenographic examination.

The responsibility of the dentist to replace faulty restorations that obviously are causing continued irritation that will lead to loss of the supporting tissues is equally as great as his responsibility to restore carious lesions of the teeth. A beau-

4. Prinz, Herman. Diseases of the soft structures of the teeth and their treatment, ed. 2. Philadelphia, Lea & Febiger, 1937.

5. Miller, S. C. Textbook of periodontia, ed. 3. Philadelphia, Blakiston Co., 1950.

6. Goldman, H. M. Periodontia, ed. 2. St. Louis, C. V. Mosby Co., 1949.

7. Coolidge, E. D., and Hine, M. K. Periodontia; clinical pathology and treatment of periodontal tissues. Philadelphia, Lea & Febiger, 1951.

8. Arena, F. J. Operative dentistry and its relationship to periodontal disease. New York J. Den. 12:9 Jan. 1942.

9. Thomas, B. O. A. Relationship of operative procedures to the health of the periodontal tissues. J.A.D.A. 39:522 Nov. 1949.

10. Dummett, C. O. Etiologic factors in periodontoclasia that the average practitioner can eliminate. J.A.D.A. 31:1480 Nov. 1944.

11. Fee, A. H. Operative considerations of contact points and proximal contours. New York J. Den. 10:359 Oct. 1940.

12. Glickman, Irving. Change in emphasis needed (editorial). J. Periodont. 21:166 July 1950.

13. Allen, Hunter S. President's address before 35th annual meeting of the American Academy of Periodontology, October 11, 1951. J. Periodont. 23:55 Jan. 1952.

Fig. 1 • Absence of proximal contact between crown serving as retainer for cantilever bridge and first molar has created food pack, resulting in deep intrabony pocket

tifully carved restoration that hermetically seals the cavity is of little value to the patient if it fails to make proximal contact with the adjacent tooth and thereby becomes the site of an inflammation-producing food pack. If the offending restoration was fabricated by the attending dentist, then the loss of time and expense incurred in its replacement are his obligation. In instances where the operative work was done by a previous practitioner, however, the patient has to shoulder the financial burden. When the obligation rests with the operator, there is little valid argument against immediate replacement of the faulty work, but when the patient must bear the expense, some dentists only suggest its replacement and leave the decision to the patient. The patient is certainly not qualified to make such a decision.

If a restoration surrounded by caries is found through a dental examination, the operator doesn't suggest that the restoration be replaced—he insists on it in order to serve the best interests of his patient. The same certainly should be true when an examination reveals dental restorations that are injuring the periodontal tissues.

When the irritating restoration serves as a retainer for a fixed bridge (Fig. 1) the practitioner admittedly faces a problem in convincing the patient of the necessity for its replacement, since in most cases there will be few or no subjective symptoms. This does not relieve the dentist of his responsibility, however. The problem must be surmounted by an adequate presentation of the problem and, most important, by gaining the patient's confidence.

The oral prophylaxis is recommended before restorative procedures are initiated in order to remove any irritating deposits which promote hypertrophied and inflamed gingiva. This procedure not only reduces the opportunity for traumatic injury to these tissues during operative work but also facilitates the latter by eliminating any freely hemorrhaging gingiva.

OPERATIVE PROCEDURES

With the recent popularity of the so-called "brush" technic for the self-polymerizing acrylic resins which requires adequate access to a Class III cavity, the use of the bow-type interproximal separator has increased. The injudicious application of this instrument can result in an injury to the periodontal tissue which invites the ever-present mouth organisms to develop deeper infection of the supporting tissues of the tooth. The bows of this instrument must be securely propped with either baseplate guttapercha or modeling compound to prevent the jaws of the separator from impinging on the gingiva (Fig. 2, left). A minimum amount of separation should be created, and this is obtained slowly by turning the adjusting screws no more than a full turn at definite intervals after separation is started.

Ligatures and rubber dam clamps likewise must be placed so that they do not impinge on the gingival tissue. Electric cautery or escharotic drugs must never be used to eliminate weeping gingival tissue in an effort to obtain the dry field

necessary for successful operative dentistry. The use of such agents invariably results in the loss of the interdental papillae. An effective measure, and one that is kind to the soft tissues, is the application of a 30 per cent hydrogen peroxide solution. A cotton pellet saturated with this drug and packed interproximally for a minute will liberate sufficient nascent or atomic oxygen to completely blanch the gingiva for an 8 to 10 minute working period (Fig. 2, right). If a longer working period is needed, the drug can be applied easily a second time. Although blood will be forced away from the superficial tissue for this period, the gingiva will return to normal.[14] This application actually is beneficial if the gingiva is at all hyperemic. Orban and others[15-17] recommend the use of 30 per cent hydrogen peroxide solution as an adjunct to other periodontal therapy. The drug has a rather low pH and often will cause an irritative reaction unless it is neutralized with a small amount of a 5 per cent solution of sodium bicarbonate. One drop of the latter solution to about 10 drops of the 30 per cent hydrogen peroxide solution will prevent this. Such a mixture is stable only for about 30 minutes and therefore must be prepared at the time of its application.

According to our survey of 400 patients, faulty restorations that cause gingival inflammation which is followed by destruction of the alveolar bone usually fall into one or more of the three following categories: (1) faulty proximal contact relationship, (2) faulty interproximal embrasure contour and (3) overextended or overhanging margin. All of these act as irritants. If any or all of these defects were present, a definite round cell infiltration of the soft tissue and usually osteoclastic resorption of the adjacent bone were observed microscopically.[6] The irritation was slight at first, but a marginal periodontitis was established and was followed by deeper destruction if the irritating restoration was not replaced (Fig. 3).

The inflammation spreads from the gingiva by way of the penetrating interseptal arteries into the alveolar process, and resorption of this process may be seen roentgenographically as one of the first signs of periodontitis. The infection continues apically into the alveolar bone proper and there is a replacement of the fatty marrow with a fibrous type bone marrow. There is osteoclastic activity with concomitant proliferation of the

14. Orban, Balint. Action of oxygen on chronically inflamed gingival tissue. J.A.D.A. 29:2018 Nov. 1942.

15. Orban, Balint. Periodontal disturbances: practical management. J.A.D.A. 35:545 Oct. 1947.

16. Orban, Balint. Atomic versus molecular oxygen. J. Periodont. 17:147 Oct. 1946.

17. Chace, Richard. Practical periodontia. Presented before the Section on Periodontia, ninety-first annual session, American Dental Association, November 2, 1950.

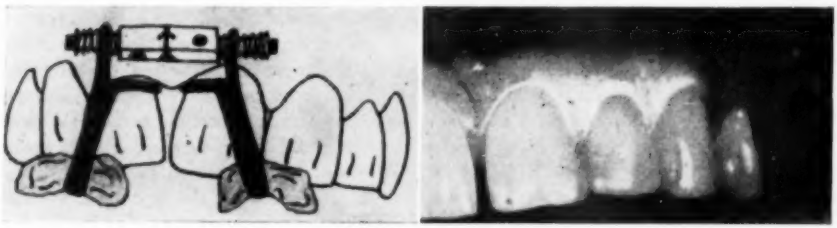

Fig. 2 • Left: Bow-type separator supported by modeling compound. Right: Appearance after 30 per cent hydrogen peroxide solution has been applied to gingival margin of upper lateral incisors and cuspids

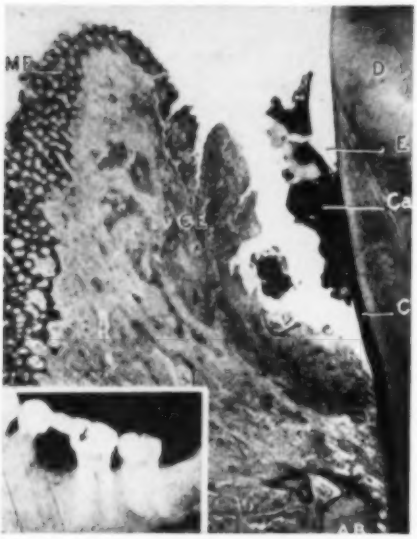

Fig. 3 • Local periodontitis around irritating crown. D: dentin; E: enamel; Ca: calculus in gingival sulcus; ME: mouth epithelium with ragged surface and no hornification; CE: sulcus epithelium with rough and inflamed surface; AB: alveolar bone. (Courtesy E. D. Coolidge and M. K. Hine)

epithelial attachment apically and the classic periodontal pocket is formed (Fig. 4). With the possible exception of a few inflammatory cells at the base of the gingival sulci, that portion of the periodontal membrane still intact will show no pathologic condition. It is a slow, insidious, progressive, local destruction.

Proximal Contact Relationship • An error sometimes found in proximal relationship is the absence of any contact at all. This condition obviously will result in a gross vertical food pack. The space between two approximating marginal ridges may vary from slight (Fig. 5, above) to a couple of millimeters (Fig. 5, below). The latter condition is more easily tolerated because of the possibility of a better self-cleansing action. A more frequently observed error, however, is an improperly formed contact. In posterior teeth, contact areas rather than points are needed, for although small contact points will sufficiently protect the cone-shaped interproximal papillae between anterior teeth, wider areas of contact are needed buccolingually to protect the broader interproximal papillae between bicuspids. Still wider areas are needed between molars (Fig. 6). A pin-point contact between molars usually results in a food pack. A vertical food pack is invited if the contact area, though sufficient, is placed too far gingivally, creating a deep occlusal embrasure.

The importance of the occlusal embrasure as a spillway for food is stressed in the literature, but in our observation of the 400 patients, the greater error, and one frequently committed, was the creation of too deep an occlusal embrasure which promoted hydraulic wedging of the teeth apart intermittently during mastication. The contact should be immediately below the adjacent marginal ridges, which should be of equal height and have accentuated buccal and lingual sluiceways for the deflection of food (Fig. 7). Even if all the rules of good operative dentistry are followed, a plunger cusp striking in the occlusal embrasure of two approximating marginal ridges will have a tendency to wedge the teeth apart and also will open the contact intermittently during mastication. Such cusps should be reshaped with stones as a step in the technic of restoring the opposing teeth.

Interproximal Embrasure Contour • While vertical food packs must be avoided by the proper construction of proximal contact areas and the removal of plunger cusps, horizontal food packs likewise must be guarded against through correct interproximal embrasure contour. The normal slight convexity of the proximal surface of the tooth must be restored by an accurate carving of the wax pattern for castings and by proper matrix adaptation for amalgam restorations. Particular care

must be exercised in the use of a gingival wedge in alloy work, for if this is inserted above the gingival floor of the cavity a concave proximal surface will result on the amalgam restoration. The force of the cheeks and the tongue creates a horizontal food pack in such improperly contoured interproximal embrasures.

Overextended or Overhanging Margin • All dentists are acquainted with the consequences of the overhanging gingival margin, whether it be in the form of interproximally packed amalgam (Fig. 8, left) or of a poorly fitting gold crown (Fig. 8, right). The filling material itself usually acts as a constant irritant to the soft tissues and it serves as a nidus for the collection of food debris. The gingival tissues surrounding such a restoration invariably are cyanotic and turgid and will hemorrhage at the slightest provocation. Overhanging gingival margins cannot be tolerated even in the most immaculate mouths, and they substantially increase the burden for those patients who have difficulty with oral hygiene. The results of overhanging margins are familiar to all

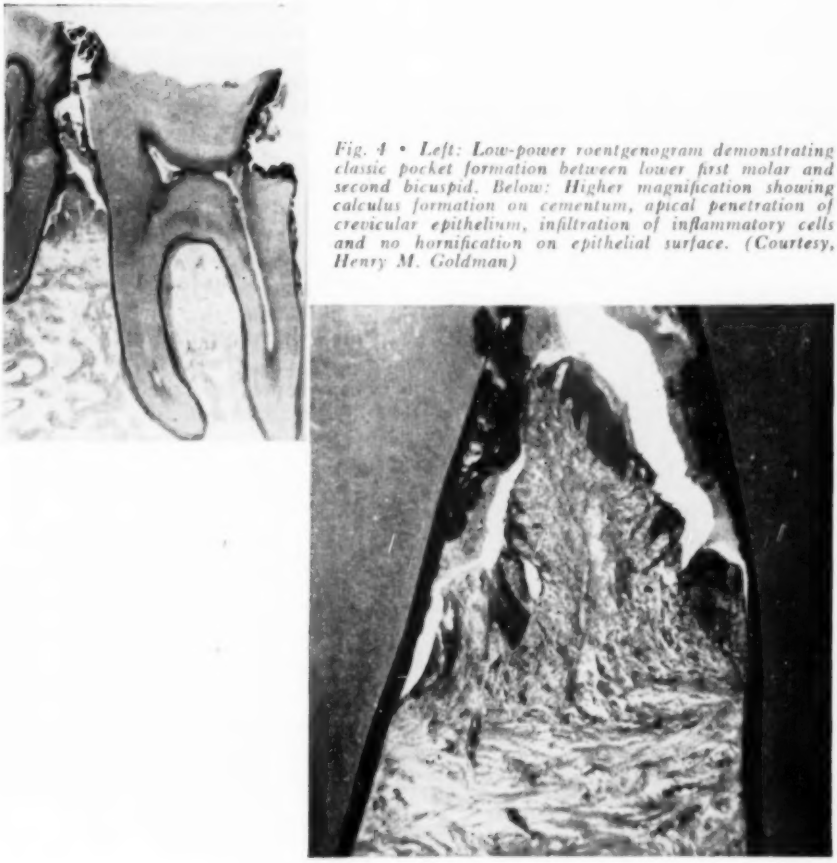

Fig. 4 • Left: Low-power roentgenogram demonstrating classic pocket formation between lower first molar and second bicuspid. Below: Higher magnification showing calculus formation on cementum, apical penetration of crevicular epithelium, infiltration of inflammatory cells and no hornification on epithelial surface. (Courtesy, Henry M. Goldman)

dentists, yet examinations too frequently reveal their presence. Even the conscientious operator must be constantly alert to avoid inadvertently producing these overextensions. Roentgenograms should be taken of all castings so as to expose possible overextension before final cementation. Also it is well to take postoperative bitewing roentgenograms of silver alloy restorations.

In order to prevent this error in amalgam work, the gingival wedge usually is indispensable. The wedge should be of wood and should be moistened before insertion to obtain the snugness assured by the resulting slight expansion of the material. As mentioned earlier in discussing the interproximal embrasure contour, the wedge must not be placed above the gingival floor of the cavity and yet it must not be inserted too far below the level of this floor or an overpack is invited. The superior border of the wedge should be flush with the margin of the cavity. When the cavity is viewed occlusally, it is possible to ascertain whether the wedge is to be inserted buccally or lingually according to the buccolingual inclination of the proximal surface of the tooth. In about 70 per cent of the patients, the lingual embrasure is the larger and the wedge must be placed on that side. In a few teeth it will be necessary to insert a wedge from both sides in order to gain a close adaptation of the matrix band.

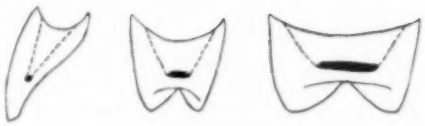

Fig. 6 • Correct contact areas for incisor, bicuspid and molar teeth

Fig. 5 • Above: Slight space between mesial marginal ridge of lower second molar and faulty distoocclusal amalgam restoration in first molar, resulting in deep periodontal lesion. Below: Wide interproximal space between upper first and second bicuspids

After the removal of the matrix, a no. 12 Bard Parker knife blade is an excellent instrument for trimming any slight excess of material, should any still form at the gingival margin. If amalgam has been condensed properly against a well-adapted stainless steel matrix band supported by a gingival wedge, there will be little or no trimming necessary. Also there will be no need to polish the proximal surface at a subsequent visit if the remainder of the restoration has been furbished to a bright finish. Amalgam correctly condensed against a stainless steel band has a smooth surface without further finishing, and in many instances more harm than good is done to the gingiva by attempting to polish the gingival margin with strips and disks. If this portion of the restoration is formed as outlined by properly manipulated amalgam into a dry cavity, the material will

be free of excessive expansion and it seldom will be necessary to refinish the gingival margin.

All irritating overhanging margins are not confined to the proximal portion of Class II restorations, however, and often inflamed gingiva is found around poorly-formed Class V fillings. Such fillings serve as a matrix for the accumulation of the oral detritus, and the result is a constant inflamed condition of the contiguous gingiva, which often leads to considerable recession of these tissues.

Fig. 7 • Proper proximal contact and correct sluiceways on two approximating Class II amalgam restorations

POSTOPERATIVE PROCEDURES

The postoperative aspect of the relationship between operative dentistry and periodontal disease will seem rather insignificant to some; nevertheless it warrants consideration when it is recognized that teeth can be lost because of the dentist's lack of thoroughness in removing all ligatures, remnants of the rubber dam, and particles of amalgam from the gingival sulcus. Such foreign bodies can cause an acute periodontal abscess that is difficult to explain to the patient. Smith[18] treated a patient who had been examined by both physicians and dentists in several major cities in an endeavor to find the possible cause of a believed progressive degeneration of the alveolar bone around both upper central incisors. After an exhaustive search for systemic cause, a flap operation finally was performed and a radiolucent rubber band, which some dentist had placed around the teeth in an effort to correct a diastema and had failed to remove, was found to be the cause of the bone destruction.

18. Smith, D. J. Personal communication, Feb. 6, 1950.

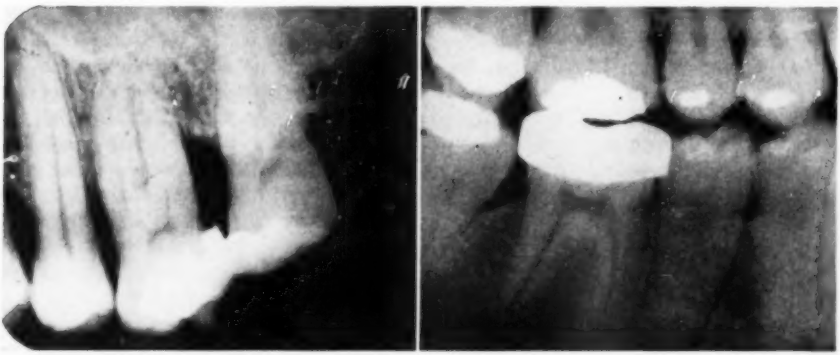

Fig. 8 • Left: Overhanging gingival margin of Class II amalgam restoration resulting in periodontal destruction. Right: Poorly fitting gold crown on lower first molar

CONCLUSION

Because of the relationship between periodontics and operative dentistry, all dentists influence the periodontal health of their patients, regardless of whether they treat patients with periodontal disease or refer them to a specialist. The periodontist cannot accept the responsibility for the periodontal health of patients unless the general practitioner himself is practicing preventive periodontics through sound dentistry.

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The periodontal benefits of well-planned diets

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Only by the selection of the right foods can the physiological requirements for health be met.[1] Dental health—for the adult that is periodontal health—is the specific concern of the dentist. In our land of food surpluses, high income levels and numerous overweight individuals, incredible as it may seem, countless citizens have neither a well-balanced diet nor good eating habits.

Studies of the nutritional status of the population provide evidence that the incidence of inadequate diets is almost unbelievably high. When the area surveyed is one of abundant food production, high incomes in proportion to living costs and above average educational standards, the prevalence of inadequate diets is of serious social significance. Such an area of potentially good nutrition was studied in 1946 and 1947 by Eppright,[2] who investigated the food habits of 1,051 adults in Iowa. He found that only 5 per cent of the diets seemed adequate in all food essentials. A large proportion of the diets were grossly inadequate in calcium and riboflavin. Intakes of these essentials are satisfactory only if approximately three cups of milk are consumed daily; yet only 28 per cent of the adults drank as much as two or more cups daily. Good diets were more frequent in middle income groups than in high or low income groups.

In New York State the diets of only a third of all rural, nonfarm and village families studied by Young and Pilcher[3] were adequate in all nutrients. The best diets were those of young children, men had the next best diets, and women of child-bearing age and adolescent girls had the poorest. In these groups also, calcium was the nutrient most often inadequate. One-half the women of child-bearing age had intakes of less than 50 per cent of the desirable allowance for calcium. Over half of the adolescent girls had less than 90 per cent of the desirable

1. Report of United Nations Conference on Food and Agriculture. Pub. no. 1948, 1943, p. 46.

2. Eppright, E. S. Food habits and preferences; a study of Iowa people of two age groups. Iowa Agri. Exper. Station Res. Bull., No. 376, Dec. 1950.

3. Young, C. M., and Pilcher, H. L. Nutritional status survey, Groton Township, New York; the nutrient usage of families and individuals. J. Am. Dietet. A. 26:776 Oct. 1950.

allowance for each nutrient studied. The implications of these data in reference to the future mothers and to the effect on the health status of their children are grave. The fact that the intakes of calories, protein, calcium and vitamin C tended to be lower for older people than for younger people is of immediate concern to dentists. In another survey, blood protein tests revealed an amazingly high incidence of protein inadequacy for patients from families of high income levels.[4]

F. J. Stare has stated:

> It was a surprise to me to see that the majority of x-ray studies of adults past the age of 45-50 years, showed considerable demineralization of bone, and, one wondered if low dietary intake of calcium, or vitamin D, over the years, might not have been prominent factors in the etiology of this demineralization.[5]

Studies of measured intake of calcium consistently indicate 1 Gm. of calcium a day as the desirable allowance. This is the quantity in 1 quart of milk. According to statistics, 1 Gm. of calcium meets the requirement of all but one adult in each 100. For some it provides a surplus, but a moderate surplus is a form of insurance and a contribution to good health. Animal experimentation provides evidence that increased use of milk alone is effective in delaying onset of old age and in maintaining life at its prime.[5, 6]

APPRAISAL OF NUTRITIONAL STATE

Admittedly, there is need for more studies on the correlation between health records, including dental health records, and dietary habits of patients. No exact measure of nutritional status has been devised. As yet clinical judgment is based on nonspecific symptoms. Even the symptoms traditionally regarded as evidence of scurvy, beriberi, pellagra and other frank deficiencies may be caused by lack of nutrients other than those routinely considered. Clinical signs must be interpreted in the light of medical, dental and dietary histories, physical findings, laboratory studies and, often, the results of therapeutic tests.

A further complication arises because judgment and interpretation by an examiner are determined by his own physical condition. In one instance when each patient was rated by several medical examiners as undernourished, adequately nourished or obese, there was a positive correlation between the judgment of the status of the patient and the examiner's own weight. The heavier physician was inclined to judge fewer people overweight and more people underweight than did the thinner physician.[7]

Objective criteria are needed to measure the state of nutrition. As yet biochemical examinations usually result in negative findings even in populations known to be undernourished. Diagnosis of acute deficiencies is less of a problem than diagnosis of the more likely chronic or marginal deficiencies. Therapeutic tests in acute nutritional diseases show prompt and often abrupt remission of symptoms. Evidence of restorative changes in instances of marginal deficiencies may be obtained perhaps only after a period of years. The validity of results thus obtained can be questioned, since control of other conditions during the period is not possible. If it were easy to estimate the nutritional assets of an individual, diet would receive closer attention.

RELATIONSHIP OF DIET AND PERIODONTAL CONDITION

There is evidence that nutritional deficiencies damage periodontal tissues.[8, 9]

4. Trimmer, R. W., and Lundy, C. J. A nutrition survey in heart disease. Am. Pract. 2:448 March 1948.
5. Sherman, H. C. Calcium in the chemistry of food and nutrition. Nutrition Rev. 10:97 April 1952.
6. Sherman, H. C. Selected works. New York, Macmillan Co., 1948.
7. Darby, W. J. Evaluation of symptoms and signs of deficiency disease. Federation Proc. 9:592 Sept. 1950.

Of necessity, most research has been done with laboratory animals. Supplementary studies on human subjects indicate that many tissue reactions are similar to those reported for animal tissues. Therefore, the dietary habits of dental patients should receive attention.

Dietary supplementation which has been attempted as the sole treatment for gingivitis or periodontal disease has produced little benefit. It has been observed clinically that by means of local treatments gingival tissues can be restored to a natural pink color, proper texture and firmness; but for the maintenance of tissue health after treatment and likewise for the prevention of periodontal disease, attention to diet is necessary. Linghorne and others[10] demonstrated that those subjects who ingested at least 75 mg. of ascorbic acid daily, whether from food or from pharmaceuticals, were less likely to have recurrence of gingivitis.

Unfortunately, the preventive role of diet has received little attention from dentists. Every day restorative procedures save many thousands of teeth, which provide function and comfort for the patients. This beneficial service could be supplemented by a broader interpretation of dental responsibility. Inadvertently, dentists have permitted the public to think of them primarily as tooth-repairers, with the result that people do not realize that they should go to the dentist to obtain other services and that they should expect to pay for all such services: diagnosis, instruction in prevention, restorative procedures. Patients expect to pay physicians for all types of service, but many patients expect to pay dentists only for actual restorative procedures. Until the public is educated to a wider concept of dental service, economic pressures will keep many dentists from offering preventive dental services, including dietary advice.

Nevertheless, dentists are more than glorified technicians; they are an integral part of a full health service. The time has come for the dentist to play an active role in the promotion of dental health. The first step is to bring about a change in thinking on the part both of the dentist and of the public. For the accomplishment of this objective, an effective educational campaign must be developed to change long established patterns. Evidence that such a trend already exists is the activity of dentists in the promotion of fluoridation of water; but this action is not enough, for it deals only with tooth preservation and does not extend to preservation of supporting tissues. Both aspects are related to diet. Children whose teeth have developed in an area with a fluoridation program still require dietary supervision, since the structure and composition of the bone and the supporting tissues around the teeth are constantly influenced by diet.

EFFECT OF DIET ON SUPPORTING TISSUE

Periodontal disturbances, particularly of bone, have been produced readily and frequently in laboratory animals by diets too low in or with an improper balance of calcium and phosphorus or by diets lacking in vitamin D. Severe bone disintegration is particularly easy to produce. An indication of similar effects in human subjects has been demonstrated by a study which showed a statistically significant inverse correlation between food-calcium intake and degree of periodontal disease; that is, the lower the food-calcium intake, the greater was the degree of periodontal disease.[11]

8. Schour, I., and Massler, M. The effects of dietary deficiencies upon the oral structures. J.A.D.A. 32:714 June 1945.

9. Radusch, D. F. Nutrition and dental health with special emphasis on periodontal relationships. J.A.D.A. 28:1524 Sept. 1941.

10. Linghorne, W. J., and others. Relation of ascorbic acid intake to gingivitis. Canad. M. A. J. 54:106 Feb. 1946.

11. Radusch, D. F. The relationship between periodontal condition and certain dietary factors. J. D. Res. 18:305 Aug. 1939.

Furthermore, calcium intake was found useful in the prediction of periodontal condition. Inclusion of factors other than calcium intake, factors such as protein, animal protein, iron, vitamin A or vitamin C intake, acid-base excess or age, resulted in prediction values no greater than for calcium intake alone. A correlation coefficient of 0.95 between calcium and milk in the diets showed that the calcium was predominantly from milk.

Karshan and others[12] reported that as far as low intake of food essentials was concerned there were no observed differences between individuals with periodontosis and those with healthy tissues. Degree of deficiency and stage of disease, however, were not considered. Furthermore, use of percentage is inadvisable when the number of subjects is small, since its use may suggest nonexistent relationships.

Although data from direct study of human subjects are limited, it is clear that periodontal tissues require a regular supply of dietary essentials balanced at a satisfactory level. Most people in the United States eat more than enough food to satisfy hunger, but they do not appreciate fully that foods used to satisfy appetite often are too low in essential nutrients. The nutrition of any person —overweight, underweight or maintaining a steady supposedly ideal weight—is equally likely to be inadequate or marginal. Weight is not a reliable criterion.

DIET SURVEY

Even though nutritional status is a reflection of previous as well as of current diet, investigation of current diet is a useful method for studying the nutritional status of the individual. An effective means of determining the current diet is to have the patient keep a daily record of everything eaten during a typical week.

Such records show that most patients let whim or fancy determine their choice of food with no regard for the fact that the body cannot continue to perform its functions properly unless sufficient quantities of essential nutrients are supplied regularly.

When a patient does consider diet, usually his own evaluation is false; he is inclined to overestimate his consumption of protective foods and to underestimate his consumption of refined carbohydrates. Not only is a written record nearer the truth; but a recorded diet is likely to be a superior diet, since consciously or unconsciously the patient improves his diet when he has to record it.

The record should include the kind and quantity of food eaten at each meal and between meals. Better cooperation is secured from the patient if quantity is determined not by actual weight or measures but by the simpler method of recording the units of average servings; for rolls and slices of bread, the number should be specified. Weighed servings are of practical value only when samples of food are to be analyzed chemically. Variation in reliable tables of nutrient values are still such that diet surveys can be expected to indicate only whether the patient is consuming the quantity and variety of food that can be expected to supply the required nutrients daily.

DIET PATTERN

Chemical analyses demonstrate that in most instances standard allowances of nutrients are met if a simple diet pattern is followed. The pattern specifies the number of servings for each food group. The less one knows about diet, the more closely one should follow the pattern. The pattern is flexible enough to permit a considerable number of choices, but for some foods there are no dependable substitutes.

12. Karshan, M., and others. Studies in periodontal disease. J. D. Res. 31:11 Feb. 1952.

The pattern is based on daily needs of adults who have been on good diets. Patients whose intakes have been grossly inadequate should have larger portions. Instead of extra food, pharmaceuticals may be used to provide the additional nutrients.

In the accompanying chart, tabulation of daily food intakes, recorded in average servings, permits quick observation of the current diet and easy estimation of desirable additions or changes to be suggested.

At the end of a week if the basic allowances for essential nutrients have been met, all squares will be filled. The nutrient needs incorporated in this chart are summarized briefly in the following list.[13]

BASIC ALLOWANCES OF ESSENTIAL NUTRIENTS (1948)

	M		F	
Calories	2400		2000	
Protein	70	grams	60	grams
Calcium	1	gram	1	gram
Phosphorus	1.3	grams	1.3	grams
Iron	12	mg.	12-15	mg.
Vitamin A	5000	I.U.	5000	I.U.
Thiamine	1.2	mg.	1	mg.
Niacin	1.8	mg.	1.5	mg.
Riboflavin	12	mg.	12	mg.
Vitamin C	75	mg.	70	mg.
Vitamin D	400	I.U.	400	I.U.

MEAL PATTERNS

The daily meal pattern influences the nutritive quality of the diet. Not only is it wise to eat certain foods every day, but one's food intake should be distributed at well-spaced intervals. Better work can be done in the morning if one has eaten a good breakfast. A breakfast of orange juice, coffee and toast is not satisfactory. The consumption of toast, doughnuts or sweet rolls as a substitute for breakfast cereal materially reduces milk consumption and consequently protein and calcium intake.

Some animal-source protein—milk, eggs or meat—should be eaten with every meal, including breakfast. Lack of appetite, frequently given as an excuse for omitting breakfast, can be overcome by establishing new habits. After a few days one becomes accustomed to the change. Omission of breakfast is unwise even when one is on a reducing diet. A good breakfast and proper lunch would place most adult diets within recommended levels of essential nutrients.

The changing pattern of beverages has affected nutrition. It is unfortunate that many persons now think of milk as a beverage rather than as a food. Coffee and tea have no known nutrient value except for the added sugar or cream. Since many persons want coffee or tea at each meal, they omit milk without stopping to realize that milk is a food. Adults should drink milk as part of their food intake and use coffee or tea as a beverage.

RESPONSIBILITY FOR DIETARY ADVICE

Improvement of diet is not a hopeless goal. Business research indicates that in any newspaper or periodical food is the subject with the most reader appeal. If qualified sources do not provide people with facts about foods, they will follow cultists.

The conscientious dentist may become discouraged because he believes that his patients do not cooperate and that time spent in diet education is wasted. Perhaps he expects too high a percentage of cooperation. In business many contacts are usually required before a product is sold.

A dentist need not give patients complete instruction in diet and nutrition, but it is within his province to point out the importance of the right diet and to

13. Basic allowances of essential nutrients. Washington, D. C., National Research Council Reprint and Circular Series, No. 129, Oct. 1948.

CHART FOR DIET ANALYSIS

Mark 1 for each average serving of each food in the proper space.

Standard day	Food	1st day	2nd day	3rd day	4th day	5th day	6th day	7th day	Average
1 serving	Meat—fish—poultry								
3 cups	Milk (cheese)								
1	Egg								
4-6 servings	Butter, cream								
1 serving	Citrus Fruit—tomato (high vitamin C)								
1 serving	Fruit (other)								
1 serving	Vegetable (yellow or green)								
1 serving	Vegetable (other)								
1 serving	Potato								
2-3 servings	Cereal foods (enriched)								
2-3 servings	Cereal foods (whole grain)								
	Sugar								
	Vitamin Supplements								

outline a specific pattern. Patients need to be reminded that tissues of the mouth are just as dependent on regular intake of essential nutrients as other body tissues. If disease of the teeth themselves or of their surrounding tissues is to be controlled effectively, dentists must encourage their patients to follow good diet patterns.

832 La Salle Building

The Nation's Health • The health of the American people operated at peak load in 1952, according to Dr. Louis I. Dublin, second vice-president and statistician of the Metropolitan Life Insurance Company, with continuing good prospects for 1953.

For the fifth year in succession the death rate, which was 9.6 per 1,000 population in 1952, has been below 10; the 1952 rate, indeed, considering the number of older persons in the population, is probably the lowest in history. *"Death Takes a Half Holiday," The New England Journal of Medicine 248:209 January 29, 1953.*

Effects of diameter of nylon bristles on enamel surface

Ralph W. Phillips, B. S., and Marjorie L. Swartz,† B. S., Indianapolis*

A review of the dental literature reveals that much has been written about the toothbrush, its physical characteristics and the technics to be employed in its use.[1-8] Until recent years, the great majority of toothbrush bristles were made from the hair of the wild boar. During World War II, however, the shortage of natural bristles became acute; and most bristles were then made from nylon. Bristles of varying diameters have been employed, with a stiffer or "harder" brush being manufactured usually merely by increasing the diameter of the nylon bristle. Much discussion has arisen in regard to the relative merits of natural and nylon brushes and the advantages and disadvantages of a "soft" or a "hard" brush. Most of the published papers, however, have been concerned primarily with the effect on the soft tissues of the mouth; no research can be found related to the effects of the various types and sizes of bristles on the enamel surface itself. The purpose of this study, therefore, was to determine whether a brush with bristles of large diameter would have a different effect from that of a brush with bristles of small diameter in polishing or dulling a tooth surface. Both the rapidity of polish and the final luster attained were studied.

PROCEDURE

The general method of study was to measure accurately the luster of a tooth, brush it mechanically with a specific polishing agent and brush, and then measure the luster again to detect any surface change produced during the brushing procedure.

Sound central incisors, stored in tap water immediately after extraction, were used for all tests. Those selected possessed relatively flat labial surfaces free from caries, cracks and gross pitting. The labial surface of each tooth was buffed with a

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1. McCauley, H. B. Toothbrushes, toothbrush materials and design. J.A.D.A. 33:283 March 1946.

2. Hine, M. K. The use of the toothbrush in the treatment of periodontitis. J.A.D.A. 41:158 Aug. 1950.

3. Bell, D. G. Teaching home care to the patient. J. Periodont. 19:140 Oct. 1948.

4. The soft multi-tufted toothbrush. Editorial. J. Periodont. 22:163 July 1951.

5. Macfarlane, D. W. The stiffness of tooth-brushes. Brit. D. J. 79:179 Oct. 5, 1945.

6. Cunningham, W. M. Toothbrush design and manufacture. New Zealand D. J. 46:186 Oct. 1950.

7. Stewart, J. N. Dentifrices and toothbrushes. J. Canad. D.A. 17:448 Aug. 1951.

8. Hirschfeld, Isador. The toothbrush: its use and abuse. Brooklyn, Dental Items of Interest Publishing Co. 1939.

motor-driven felt wheel loaded with a slurry of levigated alumina. This treatment assured uniform surfaces and reduced the number of irregularities present. The lingual surface of each crown was made flat by grinding, and then the root was removed. The remainder of the crown was mounted on a steel block (Fig. 1, above left). This mounting was done in such a manner that the distance from the highest point on the crown to the bottom of the block was always the same (9.1± .02 mm.). Proper control of this factor was necessary since these blocks were designed to fit the luster-measuring apparatus, and any deviation would result in error.

The instrument[9] used for measuring the luster can be seen in Figure 1, above right. A beam of light, 1 mm. in diameter, is projected from the tube (a) onto the specimen (b). A storage battery is used to supply the current, and the intensity is controlled by a rheostat (c). Before each luster reading, the light intensity was checked and adjusted to a constant value by use of a black Carrara glass standard. The light is reflected off the surface of the specimen and is picked up by the photoelectric cell (d), which in turn activates the galvanometer (e). The smoother and more highly polished the enamel surface, the greater is the amount of reflected light, the less is the diffuse light, and the higher is the luster reading attained. The movable stage on which the specimen is secured has a vernier scale, making it possible to take readings before and after brushing on exactly the same area of the tooth.

Before any brushing tests were started, it was necessary to bring the teeth as nearly as possible to the same luster. When it was desired to study any polishing effects induced by bristles of various diameters, all teeth were dulled to a luster reading of 35 or less. This dulling was done by buffing the crown with a slurry of extra-heavy calcium carbonate impregnated in a slow-moving motor-driven felt buff wheel. When any possible dulling effects were to be measured, the teeth were raised to a high luster of at least 70 units by buffing with Buehler's polishing alumina. Thus, at the start of each test, all teeth, either dull or polished, had approximately the same starting luster.

The mechanically driven brushing machine used in this study (Fig. 1, center) made it possible to brush six teeth at one time. The brush heads were adjustable and designed to hold the toothbrush heads so that the brush would travel smoothly and evenly over the surface of the tooth. The teeth were mounted in the bottom of the pans in such a position that the brush passed across the short axis of the tooth (Fig. 1, below left). All teeth were examined microscopically before and after each test. Unless otherwise specified, the brushing period was 100 minutes, which is comparable to approximately two years of normal hand brushing.

For this study experimental brushes were made in which design, length, quality and trim of bristle were all standardized. All brushes had 50 tufts and were trimmed flat (Fig. 1, below right). The only variable was the size of the nylon filament. Brushes were made with bristles of seven different diameters: .006, .008, .009, .010, .012, .014 and .016 inch. The number of bristles per tuft did, of course, vary with each size of bristle. In the commercial manufacture of toothbrushes, the size of the hole in the head for each tuft is held constant; and the holes are filled with the required number of bristles. Thus, more bristles of .006 inch diameter are required to occupy the holes than those of .016 inch diameter. No attempt is made to manufacture brushes with the same number of bristles per tuft, since most of such brushes would be totally impractical for clinical use.

9. Instrument supplied by the Pepsodent Division of Lever Brothers Co.

The brushes of natural bristles used in one series of tests were all of the same basic design as the brushes of nylon bristles. They were classified by the manufacturers as "soft."

When the action of the brushes on a dull enamel surface was studied, a 1:1 slurry of a powder consisting of 93 per cent insoluble sodium metaphosphate and 7 per cent tricalcium phosphate was employed. Previous research indicated that this material is an excellent polishing agent.[10, 11] In those tests where the effects on a highly polished surface were observed, a 1:1 slurry of extra-heavy precipitated calcium carbonate was used as the abrasive agent. All slurries were made with distilled water.

All averages in the tables represent a minimum of at least four individual tests.

RESULTS

Effect on Dull Surface • Table 1 shows the relative polishing ability of brushes with nylon bristles of various diameters when used on a dull enamel surface with a slurry of insoluble sodium metaphosphate and tricalcium phosphate as the polishing agent. Both the average luster change from the original and the average final luster are given. It is evident that little difference was detected in the polishing ability of the various brushes. The maximum difference in luster change was only 6.3 units, while the final lusters varied a maximum of 5.1 units. Neither amount is great enough to be significant for this type of test. Actually the brushes with bristles of the smallest diameter and those with bristles of the largest diameter produced almost identical final lusters.

Visual examination of the surfaces demonstrated a rather interesting phenomenon. The surfaces of the teeth brushed with the bristles of .016 and .014 inch diameter revealed definite bands of polish. These bands were less in evidence when brushes with bristles of .012 inch diameter were used and completely disappeared when the still smaller bristles were utilized. Since brushes with bristles of larger diameter have fewer and stiffer bristles per tuft, it would seem logical that when both tooth and brush are held in a fixed position, coverage would not be as complete as with brushes with bristles of smaller diameter. The smaller and more numerous bristles would tend to cover the entire crown surface more evenly. Care was taken in these tests to read the luster only in the areas that were covered by the brush; however, it was felt that some experimental error might possibly have been introduced because of the tendency of the stiffer brushes not to brush the entire surface evenly. Furthermore, although the use of a stationary specimen and brush has certain advantages in standardizing the testing procedure, it is somewhat removed from the clinical use of the toothbrush. During toothbrushing, the brush is constantly moved; and the individual bristles never follow the same path. Therefore, in order to simulate the clinical conditions more closely and to minimize any error introduced by the bands of polish, a special brushing pan was devised so that the tooth could be rotated constantly during the test period. The pan contained a turntable in the center, on which the tooth was securely attached. A detailed description of this device can be found in another publication.[12] Every 15 seconds throughout the brushing period, the tooth was revolved approximately 15 degrees.

As seen in Table 2, the results with the rotated specimens are comparable to those obtained when the teeth were held in a stationary position. Again, no significant difference could be detected between the

10. Bailey, L. R., and Phillips, R. W. Effect of certain abrasive materials on tooth enamel. J. D. Res. 29:740 Dec. 1950.

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12. Sexson, J. C., and Phillips, R. W. Studies on the effects of abrasives on acrylic resins. J. Pros. Den. 1:454 July 1951.

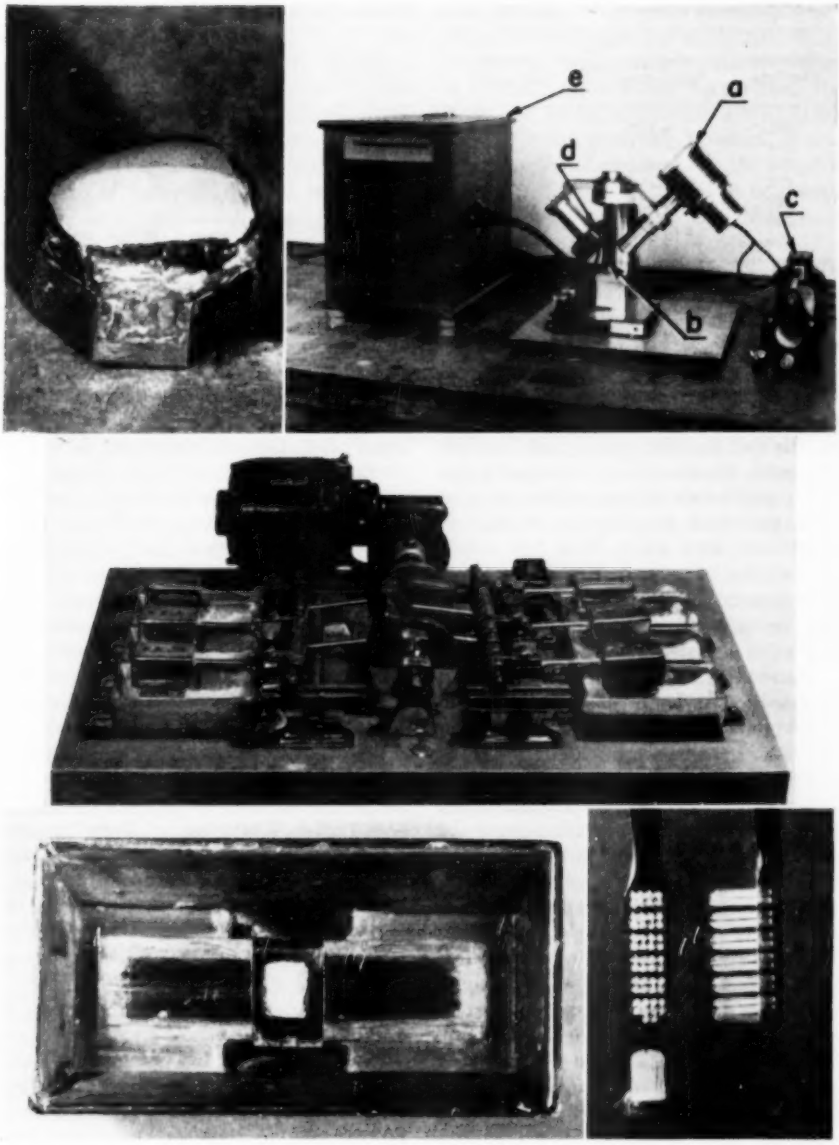

Fig. 1 • Above left: Tooth mounted on metal block. Above right: Luster-measuring apparatus. Center: Mechanical toothbrushing machine. Below left: Tooth mounted in brushing pan. Open slots on each side of tooth used to insert guide blocks. Below right: Different views of type of brush used

Table 1 • Polishing effect of bristles of various diameters on dull enamel surface

Diameter of bristle	Average luster change	Average final luster
.016	+37.5	65.7
.014	+41.8	69.7
.012	+43.0	70.1
.010	+41.8	67.6
.009	+43.8	69.0
.008	+39.5	68.0
.006	+39.8	65.0

Table 2 • Polishing effect of bristles of various diameters on rotating dull enamel surface

Diameter of bristle	Average luster change	Average final luster
.016	+32.5	66.7
.014	+35.5	70.5
.012	+33.8	68.3
.010	+37.0	68.5
.009	+32.3	67.0
.008	+33.5	66.5
.006	+35.8	70.0

various brushes. The brush with bristles of .010 inch diameter did produce a slightly higher net luster change; however, examination of the individual data reveals that the average original luster of the teeth brushed with this particular brush was somewhat lower than that of teeth on which brushes with bristles of other sizes were used. This fact would account for the greater luster change. It can be noted that the final luster attained was no greater when the brush with bristles of this size was used.

Microscopically, no difference could be detected in the final surface condition of the teeth; and no surfaces, regardless of the size of the bristles used, showed any bands of polish.

Thus, it was evident that whether the specimen was rotated or stationary the size of the bristle made no difference in the polishing of a dull enamel surface with a given polishing agent.

Effect on Polished Surface • For the study of the effect of toothbrushes with bristles of various diameters, used in conjunction with an abrasive agent on a highly polished enamel surface, the teeth were polished on a buff wheel to a high starting luster and then brushed for 100 minutes with a slurry of extra-heavy precipitated calcium carbonate. The results are summarized in Table 3.

The maximum difference in luster change was 7.9 units, while the final lusters attained varied slightly more; however, the brushing lines made by the brushes with bristles of larger diameter were even more pronounced than previously and made accurate luster measurements difficult. Because of this factor, an additional series of tests was run, in which rotated specimens were employed. The results from this experiment are recorded in Table 4. In this series, the maximum difference in the luster changes was only 2.8 units, while the final lusters varied 3.5 units. Thus, these tests corroborated the previous results and indicated no difference in the effect of brushes with bristles of various diameters employed with an abrasive agent on a polished tooth surface.

Influence on Rate of Luster Production and Luster Reduction • Even though after prolonged brushing no difference could be detected in the final luster attained by brushes with nylon bristles of various diameters, it was felt that the rapidity of luster production or reduction might vary with the size of the bristle; that is, bristles of smaller diameter might polish or dull a surface more slowly or more rapidly than bristles of larger diameter. In order to determine any difference in the rate of luster production on a dull surface, brushes with bristles of two widely varying diameters (.016 and .008 inch) were employed; and the luster was measured at the end of 2½, 5, 15 and 30 minutes of brushing. The specimens were

rotated during the brushing period.

The results, showing the average luster rise at the end of each time interval for the two brushes, are depicted in the graph in Figure 2. These results show no significant difference in the behavior of the bristles of large and small diameters. It appears that with a given polishing agent, the rate of luster production is constant regardless of the size of the nylon filament employed.

Another series of teeth was tested to determine any difference in the rate of luster reduction produced by brushes with bristles of different diameters. The same test as the previous one was employed, except that the teeth were highly polished at the start of the test and extra-heavy calcium carbonate was used as the abrasive agent.

The data for this series are recorded in Table 5. The only significant difference appeared at the end of the first 2½ minute brushing period. At that time, the brush with bristles of .008 inch diameter seemed to be dulling the tooth more rapidly than the brush with bristles of .016 diameter. From that time on, no great difference was apparent. Individual data taken at the end of extremely short brushing periods, however, are quite erratic; and it is only after approximately 5 minutes that consistent data can be secured. Consequently, little emphasis should be placed on this difference detected at the 2½ minute interval.

Effect of Water-soaked Brushes of Natural Bristles • It has generally been recommended that for maintenance of proper oral hygiene, water-soaked brushes of natural bristles should not be used. Patients are instructed to use a dry brush each time the teeth are brushed. It was decided, therefore, to use the experimental procedure employed in this study to determine whether any difference existed in the behavior of a wet and a dry brush of natural bristles on the enamel surface.

Teeth of one group were brushed for 14 minutes with dry brushes, a new dry brush being inserted every two minutes. Thus, for each test, seven brushes were used. The teeth were dull at the start of the test, and a slurry of insoluble sodium metaphosphate and tricalcium phosphate was the polishing agent. Other teeth were brushed in a similar manner, except that at the end of each two minutes brushes were inserted that had been soaked in tap water for two minutes. Other tests also were made in which the brushes were soaked 5, 10, 15 minutes and 24 hours before use.

The results from these experiments are recorded in Table 6. It is apparent that a water-soaked brush of natural bristles, regardless of the soaking time, polished the dull enamel surface at approximately the same rate as a dry one. The maximum difference in the luster change was 3.2 units and 5.5 units in the final luster

Table 3 • Polishing effect of bristles of various diameters on highly polished enamel surface

Diameter of bristle	Average luster change	Average final luster
.016	−26.5	47.5
.014	−26.0	41.5
.012	−26.2	41.5
.010	−30.4	38.1
.009	−32.2	37.0
.008	−28.9	45.6
.006	−24.3	46.3

Table 4 • Polishing effect of bristles of various diameters on rotating highly polished enamel surface

Diameter of bristle	Average luster change	Average final luster
.016	−16.8	55.5
.014	−16.5	56.0
.012	−14.0	59.0
.010	−15.5	57.3
.009	−14.0	58.0
.008	−13.0	58.0
.006	−15.3	57.0

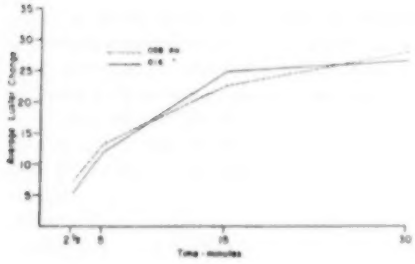

Fig. 2 • Average luster change, showing little difference in the rapidity of polish effected by bristles of two widely varying diameters

attained. It is interesting to note also that the luster change induced after 14 minutes of brushing with natural bristles compares favorably with the change noted after 15 minutes of brushing with the nylon bristles.

Table 5 • Effect of diameter of bristle on rate of luster change

Diameter of bristle	Average luster change			
	2½ min.	5 min.	15 min.	30 min.
.016	− 8.8	−11.9	−17.3	−17.0
.008	−13.3	−14.7	−18.7	−19.0

Table 6 • Polishing effect of water-soaked natural bristles

Time brush was soaked	Average luster change	Average final luster
2 minutes	+29.1	60.3
5 minutes	+30.1	61.9
10 minutes	+26.9	59.1
15 minutes	+29.5	59.8
24 hours	+30.0	59.6
Dry	+29.8	56.4

DISCUSSION

It must be remembered in evaluating these data that the purpose of this study was only to determine the effect of the diameter of the bristle on the enamel surface. No attempt should be made to construe these results as a recommendation for a particular size of bristle. The periodontal aspects are undoubtedly of greater importance and must be considered with care. In particular, these facts should be kept in mind when one studies the data concerning the effect of the wet brushes of natural bristles. Certainly, although such a brush may be just as effective for polishing the tooth surface, it has definite limitations from the viewpoint of the periodontist.

SUMMARY

Toothbrushes with nylon bristles of seven different diameters were tested in regard to their relative ability to raise or lower the luster of the enamel surface when used in conjunction with a given polishing or abrading agent.

There was no significant difference in the final luster attained with bristles of various diameters. Neither was there any apparent difference in the rate of luster production or reduction.

Brushes having bristles of diameters of .010 inch or less did not produce any bands of polish, while those with bristles of .012, .014 and .016 inch diameter did produce brushing bands. A technic of rotating the specimen eliminated this phenomenon and produced results comparable to those obtained with the stationary specimens.

In the polishing of an enamel surface with a polishing agent, the effectiveness of a brush of natural bristles is neither impaired nor enhanced by the wetness of the bristles.

Integration of services in the treatment of cleft lip and cleft palate

Herbert K. Cooper, D.D.S., D.Sc., Lancaster, Pa.

One of the great problems in public health today is the treatment and care of the handicapped individual. In the execution of that treatment a major difficulty is the lack of co-ordination of specialized services.

In modern society specialization has developed to such an extent that there is danger that the specialties will grow out of proportion, throw the entire system out of balance and defeat the very ends they are designed to serve.

In the treatment of the patient with cleft palate, the need is imperative for a better understanding of the objectives and specific functions of the various specialties that must be integrated. The emphasis of this article is not on specific technical treatment but on co-ordination of services for the total rehabilitation of the patient.

In the last half century four separate organizations have been set up to deal with the problem of the handicapped. In 1919 the National Society for Crippled Children and Adults was established. Later the National Foundation for Infantile Paralysis was founded to provide more adequate service for the poliomyelitis victim. The former organization then assumed greater responsibility in the care of the cerebral palsy patient. Both of these foundations have annual drives, the "Easter Seal" and the "March of Dimes." Both are excellent organizations, doing splendid work.

The next development in the history of the care of the handicapped occurred when Sister Kenny arrived in America with a new idea for treating poliomyelitis. Since there was a difference of opinion about the treatment of the disease, a third national institution, the Sister Kenny Foundation for Infantile Paralysis, was established. The fourth group was The United Cerebral Palsy Foundation. Each of the four national foundations limits its services to specific conditions. Though great good is being done by these various organizations, there is bound to be some overlapping and duplication. In the common zeal for organization the primary purpose for which these organizations were established, that is, the care of the crippled child, must not be overlooked.

There is no doubt that blind spots do exist, that many other conditions just as handicapping as cerebral palsy and poliomyelitis are not getting a proportional amount of attention. The inclination towards duplication, a tendency common to all specialization, results from a refusal to see beyond one's own field. The only way to achieve clear thinking is to learn to treat the individual as a whole rather than to concentrate on a part of him. The future of the specialties depends on

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a closer integration and co-ordination of all specialties wherever and whenever necessary. Unless a way is found to integrate, co-ordinate and correlate specialized training and knowledge with the services made possible by that knowledge, there will be an ever greater chaos of overlapping, duplication and blind spots. The responsibility falls on members of all professions to keep the services which they render in proper balance with the sum total of necessary and desirable services. If the specialties lose that balance, it is entirely possible that the government may step in to define the standard for future procedure.

For many years the cleft palate patient has been treated by various specialists, by the surgeon, by the dentist, by the speech therapist, each working separately, trying with the skill of his profession to solve the problem from that standpoint alone. Some have been successful, many have not.

From studies of the occurrence of cleft lip and cleft palate it is now fairly well established that one in 700 individuals is born with this form of nonunion and that therefore it is one of the most frequently found congenital deformities. With such a high ratio of occurrence and the large percentage of the population lacking medical and dental care, it is evident that a new public health need has come to light. Many states are meeting this problem by providing surgical care and hospitalization — already included in their crippled children's program — and in general limiting treatment to surgery. It is now recognized that surgery alone is not adequate in many of these cases; in fact, in some cases it is contraindicated. Recognizing the need for additional services, the Pennsylvania Assembly allocated funds whereby the Department of Health is now able to furnish all the services necessary for cleft palate therapy. A special division named the cleft palate division was set up under the bureau of maternal and child welfare. Thus, the State of Pennsylvania has made a valuable contribution to the cause of the cleft palate cripple.[1, 2]

Ever since articles concerning the Lancaster Clinic appeared in several nationally circulated lay magazines, hundreds of letters have been received from all states in the Union and from many foreign countries. They are predominantly from people with cleft lip, cleft palate, or both. Aside from their great human interest, these letters contain enough description of procedures to warrant a complete study by everyone interested in the cleft palate situation. They magnify the need for a better understanding among the members of the various specialties providing treatment for the cleft lip or cleft palate patient.

There is a great difference of opinion in regard to the interpretation and establishment of a co-ordinated program. An unrelated step by step series of procedures is not true integration. The greatest good cannot be achieved by having the representatives of one specialty after another, under the guise of a correlated program, attempt to solve the problem with the method peculiar to the specialty. True integration starts with a meeting of the minds of the individuals who first examine the patient together and then agree on a program for treatment. The error to be avoided has been stated simply: "Men do not plan to fail, they fail to plan."

Plans should be formulated before any treatment is instituted. Figure 1 is a representation of the type of coordination desired. The spoke at the bottom of the wheel is the one bearing the weight at any particular time; but all other spokes have an equally distributed load, and each in its turn at some time is the key

1. Ivy, Robert H. Modern concept of cleft lip and cleft palate management. Plast. & Reconstruct. Surg. 9:121 Feb. 1952.

2. Cooper, H. K. Crippled children? Am. J. Orthodont. & Oral Surg. 28:35 Jan. 1942.

factor. Consequently the "when" of integration is extremely important.

GROUP PLANNING

This paper, itself the product of a group rather than of an individual, is a report on the procedure followed at the Lancaster Clinic. All problems are attacked with the individual, not the specialty, in mind. In every phase of the program the importance of group thinking in determining and following a course of action is recognized.

When a baby is born, as soon as the head leaves the perineum, any problem connected with that child is a pediatric not a surgical one.[3] If the child has a cleft lip, a cleft palate or both, it is the responsibility of the pediatrician to make the recommendation as to the time the surgery is expedient. The first operation is determined not by the calendar but by the condition and nutrition of the baby itself.

In all cases of cleft lip or cleft palate or both, only the lip is operated on at the first operation. After the surgical repair of the lip, periodically for several years the baby is seen by the surgeon, the pediatrician, the orthodontist and the speech therapist. During these visits an attempt is made to have the speech department and the psychological department give counsel to the parents or guardian of the child. The psychologist must emphasize the importance of a proper attitude toward the child. The over-protection which the average mother gives the patient is as great a hazard for the individual's future life as the deformity itself. Though these periodic visits may seem to some to be unnecessary, they are important in their psychological effect. At this stage it is the parents who are suffering from the trauma, not the child.

At the earliest age possible, a preliminary speech evaluation is made; an audiometric examination is given in order to discover a hearing loss as early as possible, since it may indicate disease of the ear besides being a tremendous hazard in acquiring good speech. All cases in which a hearing loss is discovered are referred to the clinic otologist. A hearing loss if neglected can become troublesome; the earlier it is recognized, the better is the chance of arresting the condition.

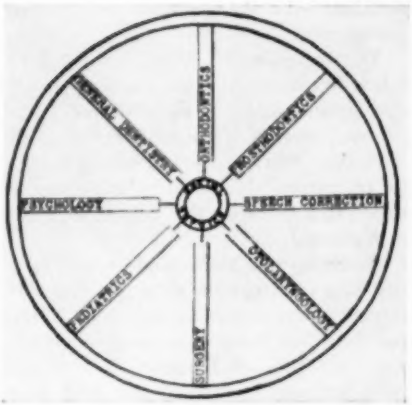

Fig. 1 • Services in a co-ordinated program. Other services to be added as need arises

As soon as possible, models of the baby's jaws, photographs of the face, and roentgenograms of the entire maxilla and mandible are taken without disturbing the child too much, for such agitation can interfere with future treatment.

After the findings of Brodie and Slaughter[4] and of Graber[5] concerning the damage that may be done by radical and injudicious surgery have been considered, the next step is the all important one of

3. Coursin, D. B. Treatment of patient with cleft palate; present day concepts of pediatric responsibility. Am. J. Dis. Child. 80:442 Sept. 1950.

4. Slaughter, W. B., and Brodie, A. G. Facial clefts and their surgical management in view of recent research. Plast. & Reconstruct. Surg. 4:311 July 1949.

5. Graber, T. M. Facial morphology in cleft palate and cleft lip deformities. Surg., Gynec. & Obst. 88:359 March 1949.

deciding what shall be done for the cleft palate.

The orthodontist[6] is, of course, much interested in facial contours, the growth and development of the jaw bones and the occlusion of the teeth, for this is his field. Any genetic, developmental, extrinsic or intrinsic factor influencing any of these structures is the concern of the orthodontist.

A controversy has existed at least since the time of Kingsley[7] as to surgical procedure versus prosthetic appliance. Surgical technics have improved decidedly since the time of Kingsley, but so also have technics in orthodontics and prosthetic dentistry. Anyone familiar with the literature of the past knows that the situation as it exists today is similar in many respects to that which existed in 1875. The real controversy lies in the treatment of the palate. It is agreed that whenever the prognosis warrants it, surgery should be done; but the problem which must be faced sooner or later is: How much surgery and what type shall be employed?

So far the results of the push-back operation appear negative. At the present, enthusiasm for the pharyngeal flap technic is high. It is hoped that the technic will prove to be so successful that it will eliminate the need for any speech appliance. Since frequently there are many other dental problems connected with these cases, those responsible for their treatment should avoid becoming "gadget conscious" and keep appliances to a minimum.

In the routine dental program, speech therapy is carried out simultaneously with dental treatment. Conditions are treated as they develop, but always with group consultation before measures are established. This is the method by which the "baby program" is carried out at the Lancaster Clinic.

An entirely different procedure is adopted for cases showing postoperative failure (Fig. 2). These cases come under the rehabilitation program; most of the patients are treated in residence. At no time in their treatment is any step instituted without using the team approach. Four to five hours daily are devoted to speech therapy. Recreation is supervised; arts and crafts are taught. Psychological advice and counsel are given with as great emphasis as possible placed on the spiritual values. Until a patient of this type has been taught to accept with "serenity the things we cannot change" and has gained "the courage to change the things we can and the wisdom to know the difference," no true and lasting rehabilitation can be accomplished.

Experience in the Lancaster Clinic shows that a great number of cases in the rehabilitation program are cases of surgical failures. The files are so full of case reports of multiple attempts at surgical closure that it seems imperative to call attention to the situation. Cases for which there are records of from 15 to 30 operative procedures on the palate are common. Too much surgery tends merely to add yet another handicap to the achievement of successful speech results.

RECENT LITERATURE

Recently Kazanjian[8] stated: "In my opinion the use of obturators should be limited to mutilated palates beyond the possibility of surgical repair." The Lancaster Clinic group feels that that attitude indicates a complete lack of consideration for a truly integrated program. Experience has shown that after surgical failure in successive operations the chance of acquiring good speech is greatly hampered. As far as appearance only is involved, considerable improvement is

6. Cooper, H. K. Responsibility of the orthodontist in the cleft palate problem. Am. J. Orthodont. & Oral Surg. (Oral Surg. Sect.) 32:675 Nov. 1946.

7. Kingsley, Norman W. A treatise on oral deformities as a branch of mechanical surgery. New York, D. Appleton & Co., 1880.

8. Kazanjian, V. H. Secondary deformities of cleft palates. Plast. & Reconstruct. Surg. 8:477 Dec. 1951.

Fig. 2 • Typical deformities requiring coordination in dental and corrective surgical treatment

possible; but as far as speech is concerned, the prognosis is relatively poor.

When one reads that "the surgeon . . . is confronted with the responsibility for the attainment of normal speech in patients who have been operated upon unsuccessfully several times,"[9] one is forced to ask: "Why only the Surgeon?" If coordination of effort is to be really effective, it would naturally follow that all specialists who will eventually be called on for an opinion should be given that opportunity before too much damage has been done. Such an opportunity is provided at the Clinic through group evaluation made jointly by the plastic surgeon, the pediatrician, the otologist, the orthodontist, the dentist, the speech therapist and other specialists as indicated.

In the recent literature there are statements by conscientious men regarding the need for better understanding of the contributions of other specialties to the achievement of the final result.

Conway,[9] for example, in a discussion on the use of the artificial velum stated: "Objections to this practice are apparent at once. Such a contrivance represents at best an intra-oral crutch which requires frequent removal for the purpose of hygiene."

Since good hygiene, however, is admittedly an objective which should be paramount in every procedure, the need for it cannot be considered a disadvantage. On the contrary, it is desirable that an appliance can be removed for the purposes of hygiene. In many cases the soft palate has been closed, when from a hygienic standpoint there is so much mucus being secreted from the nasal surface that it not only becomes a speech and a health hazard but is certainly not hygienic. In fact, the very criticism of Conway on the need for cleanliness in the use of the appliance is a statement of its great advantage. Furthermore, Conway quotes thus from Dorrance:[9,10] "Excessive lymphoid hypertrophy, congestion of nasal mucosa . . . , all contributing to symptomatic halitosis, represent further argument against the continued use of these intra-oral appliances."

9. Conway, Herbert. Combined use of the push-back and pharyngeal flap procedures in the management of complicated cases of cleft palate. Plast. & Reconstruct. Surg. 7:214 March 1951.

10. Dorrance, George M., and Shirazy, Enayet. The operative story of cleft palate. Philadelphia, W. B. Saunders Co., 1933.

If halitosis is caused by the wearing of an appliance, a better understanding between specialties should be sought. Any well constructed appliance because of its ease of removal can be kept clean by the patient, and thus any cause of halitosis from that source can be eliminated.

Ivy[11] in discussing similar cases stated: "It is in these latter cases that a proper pre-treatment evaluation might have avoided operative catastrophes rendering any other form of later treatment all the more difficult."

COMMENT

Excellent plastic surgeons recently have declared that the newer technics, such as combination push-backs and pharyngeal flaps or pharyngeal flap procedures, have eliminated most of the disadvantages; but on this subject there is wide divergence of opinion. In a center such as the Lancaster Cleft Palate Clinic many cases show evidence of varying degrees of surgical failure. As time goes on, surgery will be able to overcome many of such deficiencies.

At the same time it must be recognized that even though the case is handled by the most skillful plastic surgeon the dental implications in a great majority of these cases are of paramount importance. Most of the cases involving the lip and alveolar process require dental treatment in some form if the best result is to be obtained. This statement is not meant to imply that dentistry is more important in a co-ordinated program but rather that it should be established as equal in importance to any other specialties already so recognized. The dentist should be a partner in the decision rather than an assistant. Responsibility must be shared not delegated; it should never be self-imposed nor shifted.

SUMMARY

1. Cleft palate and cleft lip because of the frequency of occurrence is a public health problem.

2. The defect should be handled similarly to other handicapping conditions such as poliomyelitis and cerebral palsy.

3. The treatment of the cleft palate or cleft lip patient requires the co-ordinated services of several specialists.

4. For cases of postoperative failure a rehabilitation program is required.

5. Because of the nature of the defect, there is particular need for the contribution of dentistry in a co-ordinated program for cleft lip and cleft palate patients.

24 North Lime Street

11. Ivy, Robert H. Recent trends in cleft palate treatment. Editorial. Plast. & Reconstruct. Surg. 5:537 June 1950.

Function of Education • The highest function of education is to make human experience contemporary; that is, to make it available for use in the life of a man or a nation. Yet a great body of scholarship remains antiquarian, and many scholars withdraw into a grammarian's funk hole, because this is safer than to deal with the great issues of the age. As a result society is the poorer for want of wisdom and the understanding that can only come from scholarship. ***Cornelis W. de Kiewiet, "Education for Survival," The Scientific Monthly 76:61 February 1953.***

Statutory means of curbing undesirable advertising by dental laboratories

Bernard J. Conway, LL.B., Chicago

This discussion must necessarily go beyond the literal scope of its title. It would be unrealistic to treat the provisions of a dental practice act or any other statute in a vacuum. The statutory provisions which affect dental laboratories define areas of activity which unlicensed persons may not invade, and any one of 48 state courts, for example, may have to decide whether the language in a particular dental practice act proscribes a certain laboratory-conducted activity. The court when in doubt will usually search the entire law, and perhaps its background, for its purpose and objectives. With the law's objectives in focus, the court is better able to interpret its language and apply its intent. Since this discussion will in part, at least, treat the interpretation and application of the laws impinging on dental laboratory activities, it must judiciously scrutinize the background out of which the laws are projected and the objectives toward which the laws are aimed.

THE PROBLEM

Advertising to the public and rendering services directly to the public by dental laboratories are realistically units of the same problem. Functionally, neither is maintained independently of the other. A laboratory which desires to extend its services to the public must advertise in publications of general circulation in order to attract patrons. Concomitantly, no laboratory would advertise its services in publications of general circulation unless it were prepared to accept the patronage of the public. Public advertising by commercial dental laboratories, then, is indivisibly joined to the larger problem presented by laboratories serving the public directly.

Dental laboratories, at least the vast majority of them, are engaged in the business of providing skilled services to a limited patronage—the licensed dentists. Purely as business institutions, dental laboratories should be in the same competitive situation, with almost identical limitations on their market, as dental suppliers. To maintain a profitable business, a dental supplier must advertise selectively to his prospective customers. His market is limited by the nature of the materials he offers for sale. No one but a dentist ordinarily would be interested in purchasing those wares. A dental supplier, therefore, confines his advertising of dental items to publications directed principally to dentists. For the dental supplier, advertising in publications of

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Formerly assistant secretary of Council on Legislation; now secretary of the Council on Dental Trade and Laboratory Relations and secretary of the Council on Federal Dental Services.

general circulation would be an unprofitable business practice.

The services provided by dental laboratories, unlike the materials offered by dental suppliers, will attract a large group of the general public, if made available to them. Although the vast majority of dental laboratories solicits business only from licensed dentists, a minority attempts to attract and serve the public directly unless prevented by law. It is the law and enforcement machinery, then, that must be relied on primarily to restrain the offensive transactions and advertising campaigns of the errant dental laboratories. Basically, it is the state dental practice act which, if effectively drafted and rigidly enforced, seems best adapted to eliminate or at least to hold to a minimum the public's direct access to dental laboratories.

DENTAL LABORATORY FUNCTIONS UNDER STATE DENTAL LAWS

The state dental practice acts, if correctly analyzed, are not designed to regulate the business transactions of dental laboratories. That effect is achieved indirectly as a necessary incident of the dental law and its enforcement. The direct objective of a state dental practice act is to regulate the practice of dentistry for the purpose of protecting the dental health of the public. It achieves that objective: (1) by confining the practice of dentistry to those who are by law morally and educationally qualified: (2) by establishing standards of professional and moral conduct to be adhered to by licensed dentists in the conduct of their practice; (3) by authorizing sanctions to be imposed on dentists who fail to meet those standards; and (4) by authorizing the enforcement of penalties against persons who practice dentistry without being licensed.

A state dental practice act to be effective must without reservation prohibit all persons not qualified by law from attempting to cure dental diseases or disorders. Each state dental law, despite variations in wording and detail, clearly aims at that objective. The essential precept of every state dental practice act is that no one but a qualified dentist, and within limits other professionally qualified persons, may perform any type of dental treatment for, or on, a human being. How does that precept apply to the services provided by dental laboratories?

No operation defined within a state dental practice act as part of the practice of dentistry may be performed by any person not qualified by law in that state. The proscription within the law applies equally to all persons unless they are specifically exempted. (State dental laws, for example, specify either that their provisions do not apply to licensed physicians, or that licensed physicians may under certain conditions perform dental operations. Again, dental hygienists in every state are privileged to operate within their limited field under the supervision of a licensed dentist.) No state law exempts those engaged in the laboratory craft. Consequently the latter are not awarded a special privilege to practice a limited field of dentistry. They may not perform any act or operation legally made part of the practice of dentistry.

A laboratory operator or employee who constructs a denture from an impression or model furnished by a dentist, and according to whatever instructions the dentist provides, is not practicing dentistry. In performing or supervising the tasks assigned to him by a dentist, a laboratory operator is responsible only to the dentist. The extent of that responsibility is to deliver to the dentist an appliance constructed according to the latter's directions. In essence, the dental laboratory sells to the dentist both skilled services and a processed product which the dentist incorporates into the treatment and cure of his patient's dental disorder. The laboratory, while serving the dentist, is only incidentally involved in the treatment provided by that dentist to his

patient and bears no responsibility to the patient for the effectiveness of that treatment.

The dental profession maintains that a laboratory operator or employee who performs one of his customary services for a member of the public at large engages in the practice of dentistry. That conclusion proceeds inescapably from the precept that anyone who attempts to cure a dental disorder by any means or method practices dentistry. A person who suffers from an ill-fitting or broken set of dentures has a dental disorder. If a laboratory operator or employee constructs or reproduces a denture or repairs or processes it in any other way for that person, he is treating a dental disorder—he is attempting to cure a dental disorder—he is practicing dentistry. But unless the state dental practice act specifically declares, or has been interpreted to declare, every one of the laboratory's customary services to be part of the practice of dentistry when performed for other than a licensed dentist, dental laboratories will be permitted to make overtures to the public at large.

If, then, a state dental practice act has been interpreted to permit dental laboratories to repair dentures for the public at large, that means, in effect, that the operation is not legally part of the practice of dentistry. By inference, therefore, it is a practice that any person may perform—in other words, a nonprofessional type of service. Furthermore, a legislature ordinarily may not make advertising connected with a nonprofessional occupation illegal. This means that if repairing dentures for the public at large is considered to be no more than a legitimate business occupation, those engaged in that business may advertise their services for public patronage.

But although a state dental practice act might be interpreted and upheld as declaring illegal every dental laboratory service provided for other than a licensed dentist, dental laboratories, nevertheless, might still have a legal, though a narrow, avenue of approach to the public. A specific example will demonstrate the apparent anomaly.

An individual goes to a dental laboratory and requests that a denture be made for him. The laboratory operator, or employee, tells the patron to go to a licensed dentist to have an impression taken. In some instances, the laboratory may suggest the name of a dentist who is located near the laboratory. The patron who approaches the laboratory ordinarily has no dentist in mind and probably will go to the dentist suggested by the laboratory. The dentist then takes the impression and sends it or a model of it to the laboratory which constructs the denture. The laboratory returns the denture to the dentist and he fits and adjusts it in the patient's mouth. The patient is billed separately for the services of the dentist and of the laboratory. The Supreme Court of Illinois, in effect, declared that manner of operation by a laboratory to be permissible under the law as it existed in 1940.[1] In that case, Winner v. Kadow, it had a slightly different fact situation before it. The court's rationale, however, would appear to be applicable to the example cited. In Winner v. Kadow, the patient went first to a licensed dentist, who took the impression. The patron then took the cast to the laboratory and requested that a denture be constructed from that cast. In all other respects, the facts are the same. The Illinois law was amended in 1945 in an attempt to overcome the Winner v. Kadow ruling.

The court, in substance, stated that a dental laboratory could bill a dentist's patient directly for its services if in doing so it did not usurp any of the functions restricted to licensed dentists, such as impression taking, fitting and adjusting. The court reached that decision even though the state's Dental Practice Act apparently declared that laboratories could not sell

1. Winner v. Kadow, 373 Ill. 192, 25 N.E. 2d 882 (1940).

their services to the public. The court did not find the sale clause invalid or unconstitutional, but instead limited its effect to transactions between a laboratory and patron in which someone other than a licensed dentist takes the impression or fits and adjusts the denture in the patron's mouth. The court reasoned that the statutory language banning all dental laboratory sales to the public, if adopted literally, would prevent laboratories from selling their services to licensed dentists since they are also members of the public. The court, in effect, interpreted the sale clause to ban the sale of illegally performed services only.

As the case was presented to the court, there was no evidence to indicate that the laboratory advertised or solicited to attract patrons. The court, therefore, confined its ruling to the question of selling services; advertising or soliciting was not an issue. Nor was the related activity of the dentist involved at issue. The conduct of a dentist in (1) accepting laboratory-referred patrons, or (2) permitting the patient to hire the services of the laboratory and to deal separately with the latter is openly unethical and would appear to be a cause for suspension or revocation of the dentist's license in many states. In Ohio, for example, the courts upheld the right of the Board of Dental Examiners to suspend or revoke a license for accepting laboratory-referred patrons. The courts agreed that such practice was the equivalent of a dentist hiring solicitors or advertising agents to promote business.[2]

Later, in Lasdon v. Hallihan,[3] the Illinois Supreme Court upheld the validity of the state's Dental Practice Act provision which made it illegal for laboratories to advertise or offer dentures or other dental appliances for sale or use to the public. The two Illinois decisions would appear to be in some conflict since the law permits the laboratory to sell its services to the public if those services are performed legally, but at the same time prohibits it from advertising or offering those services for sale or use to the public. The Appellate Court of Illinois in a later case, People v. A.A.A. Laboratories, Incorporated,[4] weakened the effect of the Lasdon v. Hallihan decision by interpreting the Illinois Dental Practice Act to permit laboratories to direct to the public advertising which stated that dentures would be made "upon receipt of an order and impression from Licensed Dentists only . . ." (The Appellate ruling was final. There evidently was no ground for appeal to the Illinois Supreme Court.) What the Appellate Court decided, in effect, was that laboratories could solicit business from a person who had already had an impression taken by a licensed dentist, or who, after reading the advertisement, went to a licensed dentist and had an impression taken. The court obviously was unaware of the proper and usual way in which the laboratory craft serves the dentists. The court evidently believed that the dentist's patient, like the physician's patient who receives a pharmaceutical prescription for medicine, was given the dentist's order to take out and have filled at any dental laboratory of the patient's choice. The Illinois Dental Practice Act was amended in 1945 in an attempt to overcome the effect of the A.A.A. case.

The basis of the Illinois Supreme Court's decision validating the prohibition against advertising to the public, however, is well reasoned and is a reflection of another of the fundamental goals of dental practice acts; that is, the assurance of high level professional conduct from licensed dentists by prohibiting them from commercializing the treatment of dental disorders. The court stated that the law prohibited dentists from commercializing dental treatment in order to protect the public against charlatans and

2. Unger v. Ohio State Dental Board, 49 N.E. 2d 937 (1943).

3. Lasdon v. Hallihan, 377 Ill. 187, 36 N.E. 227 (1941).

4. People v. A.A.A. Laboratories, Inc. 318 Ill. App. 160; 47 N.E. 2d 371 (1943).

quacks, and that if laboratories were permitted to solicit on behalf of dentists to whom they referred patrons, those dentists would be enabled to do indirectly what they could not do directly. A number of other state courts has on the same ground upheld similar provisions prohibiting laboratories from offering their services for use or sale to the public.[5] As a consequence, the privilege of selling legally performed services to the public would appear to be of no substantial value if dental laboratories are prevented from attracting patrons through advertisements.

THE ENFORCEMENT OF STATE DENTAL LAWS

The basic step toward eliminating direct dental laboratory-public relationship is to have the state's dental practice act provide in substance: (1) that every dental laboratory service constitutes the practice of dentistry if performed directly for any person other than a licensed dentist; (2) that advertising and soliciting by laboratories directed to other than licensed dentists are illegal; and (if considered necessary) (3) that the sale or delivery of laboratory-processed appliances to other than licensed dentists is illegal.

A declaration within a state dental law that certain acts are illegal, however, will not, of itself, prevent their commission. Dentists who have had experience as members of dental examining boards or as members of state society committees interested in enforcement of the dental laws will attest to that statement. Not only must the penalties to be imposed on convicted offenders, for instance, be severe enough to deter them from repeated violations, but equally important, the responsible public officials must investigate thoroughly all complaints of illegal practice and bring charges against those determined to be acting in violation of the law. The efforts of those officials, however, will not be completely effective unless they are able to command the funds and personnel to do the job.

Before a dental law can be enforced against an offender, someone must investigate his activities and obtain sufficient competent evidence to warrant prosecution. (This involves in many instances a delicate question, which is: whether the person or persons on whom illegal services were performed deliberately provoked the defendant to commit an illegal act. The courts frown on public officials who deliberately incite criminal conduct. In a number of cases involving the illegal practice of dentistry, the state prosecutor was unable to introduce the testimony of witnesses who had volunteered, or had been employed, to present themselves as patrons of dental laboratories.) Finally, the law enforcement agency of the state must cooperate by bringing legal action against the offender with a minimum of delay.

Most state dental laws impose on the board of dental examiners the major responsibility for the investigation of complaints of illegal conduct or practice. But unless the board can requisition the services of state investigators, or has the authority to employ its own investigators and to expend funds to pay salaries and other expenses connected with investigations, that agency ordinarily is unable to carry out its responsibilities properly. In addition to investigators, the board may need the services of an attorney not only to insure that sufficient and acceptable evidence has been obtained to support a particular charge, but also to advise whether the dental law applies to the undesirable practices reported. As a rule, if the board has legal counsel available, that attorney is an official representative of the state's law enforcing agency. As such, he is assigned the additional responsibility of prosecuting dental

5. Oshins v. York, 150 Fla. 450, 18 So. 2d 8 (1942); Curtis v. Registered Dentists of Oklahoma, 193 Okla. 233, 143 P. 2d 427 (1943); and Boggs v. Werner, 94 A. 2d 50 (1952), a Pennsylvania case, are noteworthy cases.

law violators. (The opinion of the board's attorney may be the means of bringing to immediate attention the need for strengthening the dental law.)

A state society, in appraising the effectiveness of its program to curb illegal dentistry, should not neglect to ascertain whether the penalties imposed under the law are severe enough to deter violations and whether the machinery for enforcement of the dental law is in good order. The society may find it efficacious to consult with the state dental board and other public officials responsible for enforcement of the dental law to determine what additional measures, if any, should be undertaken. If, for instance, the board lacks the necessary auxiliary personnel or funds, either may be authorized by amendment to the state law, usually within the framework of the dental law. (Many of the state dental practice acts permit the board of dental examiners to use the annual re-registration fees as a fund to be applied for enforcement of the act against violators. Other acts require that a portion of the fines assessed against convicted offenders be turned over to the dental board to defray enforcement expenses.) If, on the other hand, it is apparent that the principal obstacle in the path of enforcement is the law-enforcing agency's inability or failure to prosecute violators of the dental law as expeditiously as it should, the state society may appeal for corrective action to that agency and, if necessary, to the chief executive of the state, or finally to the public, if the state officials are unwilling to take corrective action. The state society, therefore, may have to stimulate both official and public indignation against the evils that flow from a failure to prosecute those who practice dentistry illegally. It may even be necessary to seek cooperation from the press to publish a report or editorial to inform and arouse the public. Public officials usually react quickly to correct administrative shortcomings brought to widespread public attention.

REGISTRATION OR LICENSURE OF DENTAL LABORATORIES

From time to time, representatives of the laboratory industry interested in preserving the proper relationship between dentists and dental laboratories have asserted that licensure or registration of dental laboratories and technicians is needed to eliminate offensive laboratory activities. Some members of the dental profession sincerely espouse that position. The vast majority of state societies, however, have decided to adhere to the recommendation of the Association which opposes in principle the registration or licensure of dental laboratories and technicians.[6] No attempt will be made to review in detail the many considerations that were involved to determine that policy. The following is intended rather to illustrate why the Association and the majority of state societies are convinced that registration or licensure of dental laboratories and technicians under state law, whatever it may accomplish, will not of itself materially assist in the elimination of unlicensed practice.[7]

A laboratory which advertises it will perform, or performs, operations which are restricted by law to dentists is subject to the penalties provided in the dental practice act. Assume that registration of laboratories becomes effective in the state in which that laboratory conducts illegal operations. At best, the laboratory registration law could include no more than a statement of sanctions already written into the dental practice act or which could be written into the act by amendment. In other words, a laboratory registration law cannot of itself expand the illegality which attaches to practicing dentistry without a license. Nor could

6. Transactions of the American Dental Association, 1950, p. 201.

7. South Carolina is the only state which licenses dental technicians. No state registers or licenses dental laboratories.

such a law provide a greater assurance than the dental practice act that its duplicate penalties could be enforced. The problems that beset the board of dental examiners in enforcing the dental practice act against laboratories which practice dentistry would remain.

The obligation to register, moreover, would not of itself induce a laboratory to cease illegal operations. A laboratory owner who practices dentistry without bothering to obtain a dental license would have no qualms about operating his laboratory without a laboratory registration certificate.

MAIL-ORDER DENTURE FIRMS

Checking undesirable laboratory activities conducted entirely within a state is unfortunately not the resolution of the whole problem. There is still another area of activity which is supposedly illegal, but which, nevertheless, continues to be exploited. It is the national or interstate activities conducted by mail-order denture firms.

A state dental law is designed to protect the dental health of persons within the state's territorial jurisdiction. The New York dental law has no effect ordinarily on the practice of dentistry in New Jersey; the New Jersey law controls in that state. If, then, a laboratory located in one state advertises and provides services to residents of other states, how can that conduct be checked legally? Where in the eyes of the law does the offensive practice take place? If it is in the patron's state, that state ordinarily has no jurisdiction over the out-of-state laboratory. It would be difficult, moreover, to make the patron's receipt of services illegal even if that were a practical solution. To do so would involve a direct restriction on interstate commerce which at least presumptively would be a usurpation of federal authority. To be susceptible to state law, then, the operations of the dental laboratory must be in violation of the law of the state in which the laboratory is located. If not, no state law could effectively control, and recourse to the federal law would then be the only alternative. This is the problem presented by those who exploit the mail-order denture market—a practice which, although considerably curtailed by federal law and enforcement, continues to plague the dental profession and to threaten the health of the mail-order victims.

The mail-order laboratories today operate thusly. They advertise in publications of national general circulation that they will rehabilitate or reproduce a denture. The patron who responds to the advertisement receives through the mail a container of a substance called "temporary reliner fluid" with instructions for its use. The substance is placed and allowed to harden on the inner surface of his denture. After replacing the denture in his mouth, the patron presses it firmly against his gum. He next removes the denture, which in effect caries an impression of his gum, and forwards it to the laboratory. (The advertisements and instructions stress that no impression is needed to renew or replace an old denture.) Within 48 hours, according to the advertisements, the laboratory mails to the patron a completely new denture or the teeth from his old denture reset in a new base. Do laboratories so engaged in the mail-order denture business violate the law of the state in which they conduct their operations? Do they violate the federal law designed to stop their activities? To date neither of these questions has been conclusively answered.

At the request of the Association, a federal law, commonly known as the "Traynor" or "Mail Order Denture" Law, was enacted by Congress in 1942 to curb the mail-order activities.[8] The law was considered necessary because the

8. Public Law 843, 77th Congress, Second Session; approved December 24, 1942; 56 Stat. 1087, 18 U.S.C. Sec. 420(f), (g), and (h).

transactions of the mail-order laboratories are interstate in character and therefore presumed to be more readily, if not entirely, subject to federal rather than state control. As drafted by the Association's Committee on Legislation, the proposal included a provision declaring advertising of laboratory services in the mails or publications in interstate commerce (national publications of general circulation) to be illegal. Congress, however, removed the advertising prohibition from the legislation and enacted into law only that part of the proposal making the services performed illegal. (Congress also removed a provision authorizing a $5,000 fine and five years' imprisonment for a repeated offense. As enacted, the law authorizes a $1,000 fine and one year's imprisonment for each offense.)

In substance, the Traynor Law makes it a federal offense to place in the mail or any medium of interstate commerce a denture not constructed in accordance with the dental law of the state into which the appliance is sent or brought. The provisions in a particular state law, therefore, are a basic factor in determining whether or not a federal offense has been committed. The state dental law must forbid at least one of the following modes of operation by unlicensed persons: (1) taking impressions or casts of the human mouth or teeth; (2) constructing or supplying dentures without an authorization or a prescription from a licensed dentist; or (3) constructing or supplying dentures from impressions or casts made by an unlicensed person. No one of the prohibitions is expressly included in the dental law of Arkansas, Connecticut, Iowa, North Dakota or Wyoming. There is, however, other language in those laws which might be extended to include at least one of the prohibitions. All other state laws explicitly conform.

As the federal law is drafted and has been interpreted by the federal courts, it is an offense, for example, for a dental laboratory to place in the mail, or to transmit through a medium of interstate commerce, a denture constructed[9] from an impression taken by any person other than a dentist licensed to practice in the state into which the denture is to be sent, if the law of the latter state specifically or effectively prohibits persons not licensed to practice dentistry from taking oral impressions. It is illegal under those conditions for a laboratory to mail or ship a denture to an out-of-state patron, if the patron himself took the impression on which the denture was constructed. The federal law does not make it a crime for the patron or anyone else to take an impression. The offense, if any, is committed by one who constructs a denture from that impression and places it in the mail or a medium of interstate commerce. The federal law, moreover, would not apply to a denture constructed from an impression or cast made by a licensed dentist of the state into which it is mailed or shipped. It is perfectly legal, therefore, for a laboratory to process work for out-of-state dentists in the same way that it serves the dentists of the state in which it is located. It would be possible, however, for an unscrupulous dentist to take impressions for patrons within his locality who are referred to him by an out-of-state mail-order firm, and to authorize that firm to construct dentures from those impressions. He would thereby remove that firm from the effect of the federal law. Most state dental laws would appear, however, to make the dentist's conduct illegal. The federal law would not apply to a denture constructed in some other way than from an impression or cast; nor would it expressly apply to the repair of a denture, whether or not it was originally constructed according to the law of the state into which it is sent.

Soon after the federal law was enacted, it was successfully enforced against a Chicago firm. The case, United States v.

9. The federal law does not expressly mention the repair or relining of dentures.

Johnson, was appealed to the U. S. Supreme Court, which refused to review it and thereby upheld the conviction against the defendant laboratory operators who were engaged in the business of constructing dentures from impressions and casts made by their patrons.[10]

The mail-order denture firms today imply in their advertising and brochures that their operations are not in violation of the federal Denture Law. Their reply to a charge of illegality would no doubt be that they are not constructing dentures, but are rather rehabilitating old dentures; that even if it is conceded that they are constructing dentures, they are not constructing them from impressions or casts, but are merely reproducing dentures using as models the patron's old dentures. That characterization of their operations, however, would appear to be contrary to fact.

The mail-order denture firms even when they reset old teeth in a new base are engaged in the process of reconstructing the bulk of a patron's denture. Further, in reconstructing an old denture or in constructing a new one, they, in fact, use an impression of the patron's soft tissues as a pattern. Despite any protestations to the contrary, the "reliner" substance placed on the inner surface of the old plate is used by the patron to make an impression of the soft tissue. In fact, therefore, a person not a licensed dentist is taking an impression. The federal law declares that a denture constructed from such an impression may not be placed in the mail or any medium of interstate commerce.

It must be kept in mind that no federal law prohibits dental laboratories from using the mails or publications in interstate commerce for advertising purposes. (The Post Office Department can, of course, take action against any firm which places fraudulent advertising in publications entered in the mails.) Again, the federal Denture Law merely prohibits a laboratory from using the mails or media of interstate commerce to provide certain specified services for out-of-state residents which would be illegal if provided for residents of the state in which that laboratory is located.

STATE VERSUS FEDERAL ACTION AGAINST MAIL-ORDER FIRMS

Whether or not prosecution of the mail-order firms on the basis of present operations is feasible under the federal law, it would be advantageous to have at least one of the state societies when faced with a serious mail-order situation determine whether the state law can be applied. If the state enforcement machinery can be used to thwart the mail-order firms, it will be a much more effective weapon than its federal counterpart.

Those who are directly interested in disclosing offenses against a state dental practice act, including the constituent and component societies of that state, and those responsible for enforcing the law are closer to the facts and are more intimately concerned with the elimination of illegal practice; in other words, offensive laboratory activities conducted within a locality and a state are fundamentally a local and state problem. The federal law, which is only incidentally concerned with those activities, should not be relied on exclusively if state laws are effective to correct the abuses.

On what ground are the state dental laws considered inapplicable to mail-order denture firms? From a strict reading of those statutes, it would appear that the operations of mail-order firms are unmistakably violative. Every state law explicitly or implicitly prohibits the construction of a denture either: (1) from an impression taken by other than a licensed dentist; or (2) without the authorization of a licensed dentist. An additional material question must, nevertheless, be re-

10. Johnson v. United States, 66 S.Ct. 28 (1945). See also 53 F. Supp. 596, 149 F. 2d 53 (1944).

solved; that is, whether the state law may be invoked against a firm whose services are directed entirely into channels of interstate commerce. Put in another way, the question is whether a state law which makes certain acts illegal in order to protect the health of those within its territorial limits can operate equally to make those same acts illegal when performed for persons not within the state's boundaries. The question, whichever way it is cast, has not been directly answered by the courts. If a state decides to resolve the question by asking the courts to enforce the dental law against a resident mail-order denture firm, that state will have to be prepared to meet the objection that jurisdiction over the operations of mail-order firms rests entirely with the federal government. That state, therefore, would have to show that the mail-order services conducted within its boundaries are properly subject to its police powers, despite the fact that the mail-order firm's freedom to traffic by mail and interstate commerce will incidentally be impaired. It is probable that a decision upholding the state dental practice act against a mail-order denture firm would be taken to the Supreme Court of the United States for final review. That court would be the final arbiter of the question of "interference with interstate commerce." The approach suggested hereafter should not be considered as the only plausible theory for overcoming the jurisdictional objection.

Each state has the authority within its police powers to regulate the practice of dentistry in order to protect the health of the public. As a necessary means of achieving that goal, a state legislature may direct, and most state legislatures have directed, that dental treatment, the cure of dental diseases and disorders, may not be exploited purely for commercial gain. A state legislature, therefore, by prohibiting dentists and any other persons from advertising dental services announces as state policy that the services performed in the treatment of dental diseases and disorders are not a commercial commodity. A dental laboratory which, while engaged in business within a state, exploits the treatment of dental disorders for profit, no matter to whom its services are directed, is thwarting the legislature's announced policy, the enforcement of which is a necessary means of applying the state's police powers toward a legitimate objective; that is, removing the treatment and cure of dental diseases from commercial exploitation. There is language in an outstanding case[11] to fortify this suggested approach. The Supreme Court of the United States in the Semler v. Oregon State Board of Dental Examiners case upheld the state law prohibiting certain forms of advertising by licensed dentists. In support of its decisions, Chief Justice Hughes said: ". . . the community is concerned in providing safeguards not only against deception, but against practices which would tend to demoralize the profession by forcing its members into an unseemly rivalry which would enlarge the opportunities of the least scrupulous . . ."

In addition, if a state law prohibits laboratories from advertising to the public at large, it may be made to apply to the mail-order firms, even though their advertisements are restricted to publications in interstate commerce; the publications in which the advertising appears normally circulate in all states including the state in which the laboratory is located.

Enforcement on the state level, if feasible, is the more certain and direct means toward elimination of the mail-order denture business. As was stressed previously, the purpose of a state dental law is to prevent practices which the state legislature has deemed to be detrimental to the dental health of the public. As a means of assuring that objective, the legislatures in almost every state have decided:

11. See Semler v. Oregon, 294 U.S. 608 (1935).

(1) that dental treatment may not be provided as a commercial commodity; and (2) that laboratories which commercialize dental treatment threaten to undermine the professional character of that treatment in complete disregard of the state's announced policy. The enforcing agencies of the state have that policy to support whenever they are asked to prosecute a person charged with commercializing dental treatment.

The federal law, on the other hand, is designed to prevent individuals from circumventing the effect of state laws. Congress and the federal enforcing officials are not directly concerned with the policy of the state law. It is not the province of the federal government to regulate professional practice. Consequently, as difficult as it may be to induce state officials to enforce a state dental law, it is much more difficult to insure the diligent policing of offenders of the federal law.

There are still other reasons for using the state, rather than the federal, procedure. The federal law does prescribe a severe maximum penalty of $1,000 or one year's imprisonment on conviction, but it does not provide for the injunction remedy which has proved to be one of the most effective methods of preventing continuing offenses.

The state laws either provide for enjoining continuing offenders or may be amended to include that sanction.[12] Already 23 states specifically authorize their dental boards or another appropriate agency to apply for injunctions. They are: Arizona, Arkansas, California, Connecticut, Florida, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Mississippi, Missouri, New Jersey, New Mexico, Oklahoma, Pennsylvania, Rhode Island, Tennessee, Texas, Utah and Washington.

Under some state laws, a dental laboratory doing business as a corporation, and therefore operating under a corporate franchise bestowed by the state, may be ordered to cease any operations which are in violation of the state's laws. A laboratory which fails to heed such an order may have its corporate franchise rescinded. This would prevent it from doing business as a corporation within that state.

The legal procedure is called "quo warranto" or an action in the nature of "quo warranto." Literally, it means "by what right." The state itself on the complaint of an interested citizen brings suit against a corporation and demands that it show by what right it performed certain acts. If the corporation cannot justify its activities, the court may order it to desist from those acts or may issue an order of "ouster." In effect, the latter order ousts the corporation from the arena of business activity in that state. It is impossible to state that the "quo warranto" type of procedure would be available or effective in every state. It has, however, been used successfully against dental laboratories in a few states.[13] State laws vary considerably and whether this or any other exceptional remedy will be applicable or effective in a particular state and under what limitations can best be answered by opinion of the state's legal agency or private legal counsel familiar with the state's laws.

The federal remedy should not, of course, be discounted as a potent weapon against the mail-order denture firms. It may, contingent on further examination, be the only front of legal attack against those firms. Whether or not that proves to be the case, circumstances may indicate that an attack from the federal level, as well as from the state level, might be the wisest course of action, if only to impress on the mail-order firms that all available resources of the dental profession have been joined against them.

SUMMARY

In summary, then, these are the steps that might advisedly be taken to eliminate as far as possible, both state and nationwide, the undesirable and offensive prac-

tices of those dental laboratories which persist in their attempts to solicit public patronage.

1. State societies.

A. Determine by means of an official opinion from the state's law enforcement agency, usually the attorney general's office, whether the state dental practice act prohibits dental laboratories from providing any type of service to persons other than licensed dentists and whether the act prohibits laboratories from directing advertisements and solicitations to the public at large.

B. If the law does not contain those prohibitions, initiate steps to have the law appropriately amended.

C. Determine from the state dental board and other public officials responsible for enforcing the dental law: (1) whether the law's sanctions are sufficiently severe; (2) whether the available remedies under the law are adequate; (3) whether the necessary machinery for enforcement, including investigatory and legal assistance, is provided; and (4) whether prompt prosecution of charges is assured. Take the necessary steps to overcome any revealed shortcomings.

D. If mail-order denture firms are conducting offensive operations within the state, determine from the state law-enforcing agency whether, in its opinion, their activities are subject to the state's control. If so, the state society should urge the enforcing agency to prosecute the offending laboratories.

2. American Dental Association.

A. If further study by the state societies and the appropriate agencies of the Association discloses the need for enforcement at the federal level, either exclusively or in implementation of state action, then an effort should be made to determine whether the federal denture law is being violated by the present activities of the mail order firms. If the federal enforcement officials believe that the federal law is applicable, the Association might urge that a test case against one of the more powerful firms be instituted. If that suit is successful, then, if necessary, action could be initiated against the remaining offenders.

B. If the federal officials refuse to prosecute when petitioned because they believe the law, as worded, is not applicable to the present activities of the mail-order firms, or if the courts decide that the law as written is ineffective, then an appeal to Congress to amend or revise the law to correct its deficiencies would be appropriate.

12. See Boggs v. Werner, 94 A.2d 50 (A 1952 Pennsylvania case).

13. A noteworthy case is Weill v. State ex rel Gaillard et al. 250 Ala. 328, 34 So. 2d 132 (1948).

Service • You can best serve the cause of the common man by developing what is exceptional in you rather than by worshiping what is average. . . . The individual by his qualities rather than his lack of them guarantees the integrity of the group. *John Mason Brown.*

COUNCIL ON DENTAL HEALTH

Summary of Council on Dental Health meeting including report of conference with labor union representatives

Because of the growing interest and activities of labor unions in health programs for their members, the Council on Dental Health believes it is important that representatives of the dental profession and labor unions confer from time to time for the purpose of exchanging information regarding the aims and objectives of the respective organizations and for the purpose of discussing methods by which these objectives may be met. Association representatives held conferences with one labor union in 1952, and during its first 1953 meeting April 12-14 at the Central Office in Chicago, the Council sponsored the first conference on a national level between representatives of the major labor unions and the dental profession.

Otto W. Brandhorst, Association president, who presided, stated that the dental profession was open-minded in its approach to the problems of dentistry and labor and was interested in studies to find the answers. Dr. Brandhorst's theme was elaborated on by Herbert B. Bain, director of the Bureau of Public Information, who keynoted the conference.

"Our entire program," said Mr. Bain, "is geared to the objective of the Association which is quite simply stated in our Constitution and Bylaws: 'to encourage the improvement of the health of the public and to promote the art and science of dentistry.'" He outlined three major principles of the American Dental Association that he stated were particularly pertinent to the conference: (1) Research should be expanded to find more effective methods of preventing and treating dental disease. (2) Dental health education should be expanded in all levels of society in an effort to help all persons maintain a higher level of personal dental health. (3) Dental care should be available to all regardless of income or geographic location as rapidly as resources will permit. Priority should be given to the treatment, prevention and control of dental disease in children and to the elimination of pain and infection in adults. The community in all cases should determine its methods for providing these services.

"We do not want to enter this conference with any categorical statements of what will or won't work," he commented. "We are as anxious as I believe you are to exchange ideas, to review the facts and to find workable solutions to our common problems."

The discussions were devoted largely to an exchange of information regarding the organizational structure, functions and methods of operation of unions and dental societies at the local, state and national levels. The participants felt it

was important to have a basic understanding of the respective groups in order to establish a good working relationship in the future.

The labor union representatives indicated that, in general, their organizations favored establishment of group practice plans in health centers and the financing of health services, insofar as possible, through prepayment or insurance plans. They complimented the American Dental Association for initiating a conference of this type and on giving the unions an opportunity to express their views on health matters.

No attempt was made to reach conclusions or agreements, but both dental and union representatives expressed the hope that additional conferences would follow. (At a subsequent business session, the Council approved plans for a second conference to be held during 1954.)

In addition to President Brandhorst, members of the Council, and various members of the Central Office staff, the following persons participated in the conference: American Dental Association—Obed H. Moen, member of the Board of Trustees; Henry F. Westhoff, first vice-president; L. M. FitzGerald, president-elect; American Federation of Labor—Mr. Lane Kirkland, assistant director, social insurance activities, and Herbert K. Abrams, M.D., medical director of the Health and Welfare Fund of Chicago Janitors' Union Local No. 25; Congress of Industrial Organizations—Mr. Harry Read, executive assistant to Mr. James B. Carey, secretary-treasurer, and Mr. James Brindle, director of the social security department of the U.A.W.-C.I.O.; International Association of Machinists—Mr. George Nelson, Grand Lodge representative, and William A. Sawyer, M.D., recently appointed I.A.M. health consultant; United Mine Workers of America Welfare and Retirement Fund—Leslie A. Falk, M.D., area medical administrator in charge of the Pittsburgh office, and Philip W. Woods, dental consultant.

SUMMARY OF COUNCIL ACTIONS

Fluoridation • In addition to citing the safety and effectiveness of the fluoridation of public water supplies, the Council developed a statement to serve as a guide for local dental societies and health agencies in determining their appropriate roles in the promotion of fluoridation. The proposed statement will be transmitted to the House of Delegates for action at the Association's annual session in September at Cleveland.

The Council commended the Central Office staff for its consultation services and its preparation of documented scientific and educational materials and urged that the staff's assistance be continued in the interest of the health of the public.

Policy Statements • The Council approved a statement, "Principles for the Determination of Acceptable Dental Prepayment Plans," prepared a preliminary statement on dentistry for patients with chronic illness, and developed a statement of policy for the American Dental Association relating to dental services under welfare health programs.

Interassociation Activities • The Council instructed its subcommittee on industrial dentistry to arrange a conference with the Health and Safety Committee of the National Association of Manufacturers to discuss the recommendations of the dental profession regarding dental health programs in industry. It suggested that the chairman and secretary of the Council offer their services to the committee of the Rural Health Conference of the American Medical Association for the development of appropriate dental health topics in the Conference program for 1954. It recommended that the Association's delegates to the National Health Council urge that body to establish a program development committee which should be instructed to propose a realistic

plan that could be conducted within the financial resources and structural organization of the N.H.C. It recommended also that the delegates suggest that assistance in the development and operation of health councils in states and communities is a type of activity which is needed and which could be a logical function of the National Health Council.

Cabinet Status for Health Department • The Council reiterated the fact that health is of sufficient importance to the American people to warrant a cabinet level status for a federal health department which would be administered by persons trained in the health sciences. These objectives can best be assured, the Council pointed out, if the Association maintains its policy of favoring a federal department of health established independently of welfare and educational agencies.

Educational Materials • The Council approved a report on "Sugar and Dental Caries: Sweetened Beverages and the Teeth" and recommended that, after approval by the A.D.A. Council on Dental Therapeutics, it be published for general distribution. The report was presented by Kenneth A. Easlick, chairman of a special committee appointed by the Council. The purpose of this committee was to collaborate with the Council on Dental Therapeutics in writing a statement on the known or potential harmful effects to dental health resulting from the frequent consumption of sweetened and acidulated beverages.

The Council approved the preparation and distribution by its Division of Dental Health Education of "flip charts" as a device for presenting visual material during lectures, and it approved the revision and reproduction of the pamphlet, *A Dental Care Plan for Low Income Groups.*

Future Conferences • The Council made plans for its Fifth Annual Dental Health Conference to be held in Cleveland, Saturday, September 26, preceding the ninety-fourth annual session of the Association, and for a conference with public health dentists to be held during the next regular 1953 Council meeting the last week in October.

With a view to developing an educational program in keeping with the interests and needs of school personnel, the Council considered plans for holding a conference in 1954 with representatives of classroom teachers, elementary school principals, secondary school principals, school administrators, the U. S. Office of Education and other appropriate groups to discuss the dental health education program of the American Dental Association.

Information on the accident and health program for American Dental Association members

The membership of the American Dental Association is familiar with the National Casualty Company's plan of accident and health insurance which was made available to each member during the charter enrollment term September 1952-December 1952. Five mailings were made during that period—September 1, September 15, October 1, October 15 and November 10. The enrollment continued through the month of November 1952 and was extended for the month of December, finally closing on December 31.

Enrollment forms were sent to members in all states with the exception of California, Nevada, Utah, New Jersey and New York where similar National Casualty Company plans already have been in existence for a number of years. Included in the enrollment campaign were members in Alaska, Hawaii, Panama Canal Zone and Puerto Rico.

The material accompanying the enrollment form stated that insurance certificates for $100 to $400 monthly benefits would be issued on November 1, 1952 to members meeting the physical underwriting requirements of the National Casualty Company. Others not meeting these requirements would have to await enrollment of 50 per cent of the Association membership before receiving their certificates for the maximum coverage of $200 monthly.

Sufficient applications were not received to put the entire plan into effect. Seventeen thousand and sixteen applications were needed for national qualification to cover both impaired and unimpaired risks and only 10,408 were received. As of April 1 approximately 7,000 of the 10,408 applicants met the physical underwriting requirements and insurance certificates were issued and forwarded to these members. Approximately 3,150 applications and checks have been returned to physically impaired members because the national enrollment quota has not been met. Such members will have to await the next enrollment period, when efforts will be made to secure the necessary quota to cover impaired risks. Two hundred and fifty-eight applications are being processed. For the time being, applications will be accepted from regular and new members who are physically fit. These applications will be credited to state and national quotas. Applicants with physical impairments who have not received insurance certificates have the right to reapply during the next enrollment campaign.

When the national quota is reached, all members will be entitled to coverage regardless of physical condition. A quota based on the number of members is also allocated to each state. When this state quota is reached, that state automatically qualifies and insurance certificates are issued to impaired risks. Qualification of the program on both state and national bases is made on the number of total applications received from both impaired and unimpaired risks. The states of Arizona, Idaho, New Mexico and South Carolina as well as the Territory of Hawaii have already attained this status and all members in those states are eligible for coverage.

Comments have been made that insurance certificates have been issued only to dentists in the younger age group. This is not true as approximately one-third of

the 7,000 insurance certificates presently in force have been issued to members between the ages of 50 and 65.

The material sent to members during the enrollment period stated that the A.D.A. plan was not intended to replace existing plans of any local or state society but was intended to supplement coverage afforded by those plans. As an illustration: if a member has coverage up to the limit of $300 under a local or state plan, he could obtain additional insurance under the A.D.A. plan. This procedure was established in order to avoid jeopardizing any local or state health and accident program.

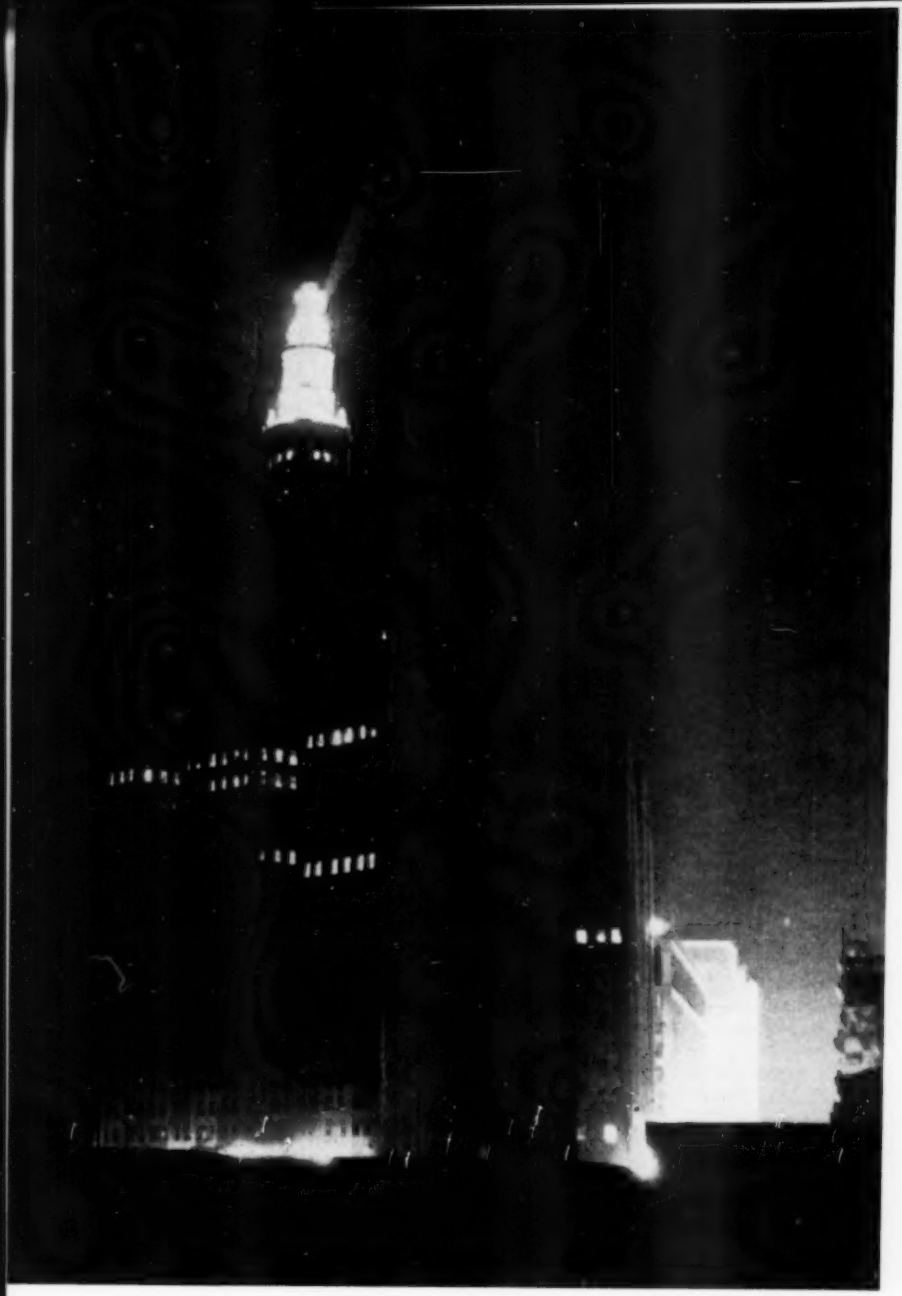
The technical reasons which make it necessary to consider a member as an impaired risk are too numerous to list and would include almost all human physical ailments. An applicant is considered as "physically impaired" when he has, or has had, disability of a recurrent nature. Some of these disabilities are respiratory disorders, heart conditions, gall bladder disorder, kidney ailment, hernia, arthritis and so forth. Previous unfavorable medical or insurance history may be sufficient reason for an applicant to be classified as an impaired risk.

Another enrollment campaign will be held as soon as practicable. Each member who has not been enrolled will receive appropriate notice of such campaign.

If any applicant feels there is anything in his medical history which would prevent his being covered by this program, it is suggested that he write to the trustee of the policy, Paul W. Zillmann, 29 Walden Avenue, Buffalo, so that a physical examination can be arranged.

It does seem reasonable to expect that 7,000 members would invest in a minimum of $100 monthly benefits in order to attain the goal of providing health and accident coverage for both impaired and unimpaired risks.

PRELIMINARY PROGRAM
AMERICAN DENTAL ASSOCIATION
NINETY-FOURTH ANNUAL SESSION
CLEVELAND, OHIO
SEPT. 28-OCT. 1, 1953



OFFICIAL CALL

To the Members of the American Dental Association:

You are hereby notified that the Ninety-fourth Annual Session of the American Dental Association will be held in Cleveland, Ohio, September 28 through October 1, 1953. The scientific session will be held in the Cleveland Public Auditorium.

The House of Delegates will convene for the annual business session of the American Dental Association at 9:30 a.m. Monday, September 28; the second meeting will be held at 1:30 p.m. Monday, September 28; the third meeting at 1:30 p.m. Wednesday, September 30; and the fourth meeting at 1:30 p.m. Thursday, October 1. All meetings of the House of Delegates will be held in the Grand Ballroom of the Hotel Statler. The Committee on Credentials will register delegates and alternate delegates beginning at 9:00 a.m. Sunday, September 27, on the mezzanine floor of the Hotel Statler.

The annual State Officers Conference will be held in the Euclid Room, Hotel Statler, 9:00 a.m. to 5:00 p.m. Sunday, September 27.

General registration will be held at the Cleveland Public Auditorium. Registration booths will be open from 10:00 a.m. to 5:00 p.m. Sunday, September 27; from 8:00 a.m. to 5:00 p.m. on Monday, Tuesday and Wednesday, September 28, 29 and 30; and from 9:00 a.m. to 5:00 p.m. Thursday, October 1.

The General Meeting will be held at 8:00 p.m. Tuesday, September 29, in the Grand Ballroom, Hotel Statler.

At least sixty days prior to the first day of the annual session, the constituent societies must file with the secretary of the Association a list of the names and addresses of delegates and alternates.

Otto W. Brandhorst, President
Harold Hillenbrand, Secretary

Otto W. Brandhorst
President, 1952-1953

Otto W. Brandhorst, president of the American Dental Association, is dean of Washington University School of Dentistry, St. Louis, an orthodontist, teacher, administrator, editor and essayist. He is a past president of the St. Louis Dental Society and the Missouri State Dental Association, former editor of the Journal of the Missouri State Dental Association and a former director of the American Association of Orthodontists. He has been secretary of the American College of Dentists since 1935 and was secretary of the American Association of Dental Editors for 15 years. Dr. Brandhorst was born in Nashville, Ill., on March 29, 1889, and was graduated from Washington University School of Dentistry in 1915, the year in which he joined the school's faculty. He has been an active member of the American Dental Association for many years, serving repeatedly as a member of the House of Delegates, consultant to the Council on Dental Health and a member of the Council on Dental Health and a member of the Council on Dental Education, representing the American Association of Dental Schools. He was chairman of three committees of the Council on Dental Education: the committees on dental aptitude testing, on the training of dental hygienists and on inspection forms. In 1935 he served on the Dental Advisory Council to the Committee on Economic Security, and in 1945 he was consultant on dental study for the Bureau of Research and Statistics, Social Security Board.

COMMITTEE ON LOCAL ARRANGEMENTS
AMERICAN DENTAL ASSOCIATION
NINETY-FOURTH ANNUAL SESSION
CLEVELAND, OHIO

H. C. Brown
Honorary Chairman

F. M. Casto
Honorary Chairman

W. J. Pryor
Chairman

E. C. Mills
Honorary Chairman

W. L. Wylie
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J. V. Gentilly (deceased)
Vice-Chairman

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Reception

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Entertainment

Mrs. H. J. Hoppe
Women's Entertainment

L. C. Meier
Clinics and Motion Pictures

M. R. Markley
Operative Dentistry

I. T. Hyatt
Oral Surgery and Anesthesia

R. M. Ricketts
Orthodontics and Oral Development

H. K. Addelston
Pedodontics

SECTION CHAIRMEN
AMERICAN DENTAL ASSOCIATION
NINETY-FOURTH ANNUAL SESSION
CLEVELAND, OHIO

B. O. A. Thomas
Periodontics

R. H. Campbell
Practice Management

F. M. Kyes
Complete Prosthodontics

C. M. Perry
Partial Prosthodontics

M. E. Nicholson
Public Health Dentistry

H. B. G. Robinson
Research

H. C. Fixott, Jr.
Roentganology

COUNCIL ON SCIENTIFIC SESSION •

William A. Garrett, chairman, Candler Bldg., Atlanta, Ga.
R. W. Frost, Bryant Bldg., Kansas City, Mo.
Wilbur D. Johnston, 215 Whitney Ave., New Haven, Conn.
Charles S. Kurz, 550 N. Eighth St., Carlyle, Ill.
Charles Patton, 235 S. 15th St., Philadelphia

COMMITTEE ON LOCAL ARRANGEMENTS •

Walter J. Pryor, chairman, 1020 Rose Bldg., Cleveland
Ralph E. Craig, vice-chairman, 10465 Carnegie Ave., Cleveland
James V. Gentilly, vice-chairman, deceased
Thomas J. McDermott, treasurer, 821 Rose Bldg., Cleveland
Stanley R. Suit, secretary, 13237 Superior Rd., Cleveland

Honorary Chairmen

Homer C. Brown, 1816 Franklin Ave., Columbus
Frank M. Casto, 801 Silverado St., La Jolla, Calif.
Edward C. Mills, 220 S. Cassady Ave., Columbus
Edward L. Pettibone, 14805 Detroit Ave., Cleveland
William L. Wylie, 2165 Adelbert Rd., Cleveland

Clinics and Motion Pictures

Louis C. Meier, chairman, 307 Cleveland Trust and Bank Bldg., Cleveland
Edward C. Knoll, vice-chairman, 511 Osborn Bldg., Cleveland

Entertainment and Social Events

Samuel S. Cohen, chairman, 2039 E. 100th St., Cleveland
Milton Rabine, vice-chairman, 9917 Euclid Ave., Cleveland

Information Services

Harry J. Geurink, chairman, 1028 Rose Bldg., Cleveland
William J. Benson, Keith Bldg., Cleveland

Publicity

John T. Reifke, chairman, 912 Rose Bldg., Cleveland
Walter H. Maurer, vice-chairman, 9917 Euclid Ave., Cleveland

Reception

Wiley F. Schultz, chairman, 624 Hanna Bldg., Cleveland
Albium F. Sadd, vice-chairman, 7904 Superior Ave., Cleveland

Women's Entertainment

Mrs. Herbert J. Hoppe, chairman, 21090 Aberdeen Rd., Rocky River, Ohio
Mrs. John T. Reifke, vice-chairman, 25706 Walden Rd., Shaker Heights, Ohio

SECTION OFFICERS •

Operative Dentistry

Miles R. Markley, chairman, 632 Republic Bldg., Denver
Henry M. Tanner, vice-chairman, 7422 S. Western Ave., Los Angeles

Oral Surgery and Anesthesia

Irwin T. Hyatt, chairman, 56 Fifth St., N.E., Atlanta, Ga.
Thomas J. Cook, vice-chairman, 1342 DuPont Bldg., Miami, Fla.

Orthodontics and Oral Development

Robert M. Ricketts, chairman, 15247 Sunset Blvd., Pacific Palisades, Calif.
Harold K. Terry, vice-chairman, 2742 Biscayne Blvd., Miami, Fla.

Pedodontics

Harold K. Addelston, chairman, 424 Madison Ave., New York
Willard T. Hunnicutt, vice-chairman, 411 Doctors Bldg., Atlanta, Ga.

Periodontics

B. O. A. Thomas, chairman, University of Washington School of Dentistry, Seattle
F. J. Fabrizio, vice-chairman, 1834 K Street, N.W., Washington, D. C.

Practice Management

Ralph H. Campbell, chairman, 4741 Spokane Ave., Detroit
Loren T. Hunt, vice-chairman, 1321 S. 18th St., Lincoln, Neb.

Complete Prosthodontics

Frank M. Kyes, chairman, U. S. Naval Amphibious Base, Little Creek, Norfolk, Va.
Daniel H. Gehl, vice-chairman, 2510 W. Capitol Dr., Milwaukee, Wis.

Partial Prosthodontics

Chester M. Perry, chairman, 16350 E. Warren Ave., Detroit
Everett C. Brooks, vice-chairman, Lister Bldg., St. Louis

Public Health Dentistry

Milton E. Nicholson, chairman, 609 Shields Bldg., Pittsburgh
Roy D. Smiley, vice-chairman, 1330 W. Michigan St., Indianapolis

Research

Hamilton B. G. Robinson, chairman, Ohio State University School of Dentistry, Columbus
Robert M. Stephan, vice-chairman, National Institute of Health, Dental Research Section, Bethesda, Md.

Roentgenology

H. Cline Fixott, Jr., chairman, 308 Selling Bldg., Portland, Ore.
Duane W. Lovett, vice-chairman, University of Iowa Dental School, Iowa City, Iowa

Essay Program

MONDAY, SEPTEMBER 28

SECTIONS:
ORAL SURGERY AND ANESTHESIA
COMPLETE PROSTHODONTICS

Presiding • Irwin T. Hyatt

2:30 P.M.

Autogenous transplants
Merle L. Hale, Iowa City, Iowa

3:30 P.M.

Round table discussion: Surgical problems related to complete prosthodontics

Moderator: Harvey C. Janke, Cleveland

A panel consisting of two oral surgeons and two prosthodontists will give their views on problems frequently encountered by the general practitioner. Visual aids will be used by the moderator in presenting the problems of the general practitioner to the members of the panel. Some of the problems to be discussed will be: (1) open-faced denture or alveolectomy, (2) treatment of hyperplastic tissues in edentulous mouths, (3) removal of all unerupted teeth or retained root tips, (4) metal implant, (5) treatment for interference of tuberosity with retromolar pads.

Discussers

Oral Surgery: William T. Ewing, Akron, Ohio, and J. Roy Bourgoyne, Memphis, Tenn.

Prosthodontics: Cecil H. Bliss, Sioux City, Iowa, and Walter A. Hall, Jr., Chapel Hill, N. C.

SECTION:
OPERATIVE DENTISTRY

Presiding • Miles R. Markley

2:30 P.M.

Symposium: Present status of acrylic resins for restoration on individual teeth

Review of the present knowledge on physical and chemical properties of the direct and indirect filling resins
George C. Paffenbarger, Washington, D. C.

Report on clinical observations of 10,000 resin restorations
Drexell A. Boyd, Indianapolis

Evaluation of acrylic resin as a restorative material
Herbert D. Coy, Richmond, Va.

Experimental studies on the response of the human pulp to gutta-percha and other filling materials
Isaac Schour, Chicago
Verda E. Jones, Chicago
John M. Spence, Chicago

SECTION:
PUBLIC HEALTH DENTISTRY

Presiding • Milton E. Nicholson

2:30 P.M.

Public dental care in Norway
Knut Gard, Oslo, Norway

Open discussion

SECTION:
ORTHODONTICS AND
ORAL DEVELOPMENT

Presiding • Robert M. Ricketts

2:30 P.M.

Dangers of loss of teeth and development of occlusion
Robert R. McGonagle, Cleveland

Requirements of orthodontics: functional and esthetic
Thomas D. Speidel, Minneapolis

The attainment of facial harmony
S. James Krygier, Wilmington, Del.

SECTION:
ROENTGENOLOGY

Presiding • H. Cline Fixott, Jr.

2:30 P.M.

Advantages and disadvantages of the long and short cone technics
Rene Rochon, Detroit

Some observations of an oral roentgenologist
Lee Roy Main, St. Louis

Use of roentgenography in differential diagnosis
Sidney P. Vail, Atlanta, Ga.

Hazards from radiation to the patient and the operator
William E. Nolan, Berkeley, Calif.

TUESDAY, SEPTEMBER 29

SECTIONS:
PEDODONTICS
PERIODONTICS
PUBLIC HEALTH DENTISTRY
RESEARCH

Presiding • H. B. G. Robinson

9:30 A.M.

Panel discussion: Is there a therapeutic dentifrice?

Moderator: Thomas J. Hill, Cleveland

Antibiotics in dentifrices
Helmut A. Zander, Minneapolis

Dentifrices designed to enhance naturally existing defense mechanisms
Robert G. Kesel, Chicago

Dentifrices containing chlorophyll derivatives
John W. Hein, Rochester, N. Y.

Antienzyme agents
Leonard S. Fosdick, Ph.D., Chicago

Efficacy of medicated dentifrices in the practice of dentistry
Albert H. Kniesner, Cleveland

WEDNESDAY, SEPTEMBER 30

SECTIONS:
OPERATIVE DENTISTRY
ORAL SURGERY AND ANESTHESIA
PEDODONTICS
RESEARCH

Presiding • H. B. G. Robinson

9:30 A.M.

Panel discussion: Newer anesthetics

Moderator: Floyd D. Ostrander, Ann Arbor, Mich.

Pharmacology of the local anesthetics: (1) topical anesthetics, (2) injection anesthetics, (3) vasoconstrictors
Sidney Epstein, San Francisco

Pharmacology of the general anesthetics
Robert A. Hingson, M.D., Cleveland

Application of anesthetics in minor oral surgery
Morgan L. Allison, Columbus, Ohio

Application of anesthetics in pedodontics
George W. Teuscher, Chicago

Application of anesthetics in operative dentistry and endodontics
John I. Ingle, Seattle

Open discussion

SECTION:
OPERATIVE DENTISTRY

Presiding • Miles R. Markley

2:30 P.M.

Economics of sound fundamentals in operative dentistry
Charles M. Stebner, Laramie, Wyo.

Application of all the newer cutting aids to cavity preparation
Donald C. Winans, Detroit

Effect of high speed burs, diamond instruments and airbrasive in cutting tooth tissue
Floyd A. Peyton, D.Sc., Ann Arbor, Mich.

Open discussion

SECTION:
PEDODONTICS

Presiding • Harold K. Addelston

2:30 P.M.

Application of basic principles of cavity preparation for deciduous molars
Joseph T. Hartsook, Ann Arbor, Mich.

Maintaining vitality of injured teeth
Harold Berk, Boston

SECTION:
PERIODONTICS

Presiding • B. O. A. Thomas

2:30 P.M.

Virus infections of the mouth
John B. MacDonald, Toronto, Ontario, Canada

Open discussion

New concept of root curettage
Arvis B. Riffle, Rochester, N. Y.
Discussion: Walter Leabo, Shreveport, La.

Periodontics in general practice
John W. Gallagher, Chapel Hill, N. C.

Open discussion

SECTION:
PARTIAL PROSTHODONTICS

Presiding • Chester M. Perry

2:30 P.M.

Dowel rest attachment in partial denture construction
Fred H. Harris, Pasadena, Calif.

Photoelastic tests to determine stresses and strains in porcelain jacket crowns
Charles B. Walton, Pittsburgh

Three-quarter crown
Edward M. Katulski, Dearborn, Mich.

Relining removable partial dentures for fit and function
Victor L. Steffel, Columbus, Ohio

SECTION:
PRACTICE MANAGEMENT

Presiding • Ralph H. Campbell

2:30 P.M.

Symposium: The dentist plans his financial future

Insurance plan
Mr. R. Dolwick, Cleveland

Investment plan
Mr. Jacob Kamm, Cleveland

Wills and estate plan
Mr. Nelson Friedman, Cleveland

THURSDAY, OCTOBER 1

SECTIONS:
COMPLETE PROSTHODONTICS
PARTIAL PROSTHODONTICS

Presiding • Frank M. Kyes

9:30 A.M.

Round table discussion: Denture service for your patient

Moderator: Victor H. Sears, Salt Lake City, Utah

Diagnosis and prognosis
Frank C. Hughes, Indianapolis

Functional impressions
Stephen G. Applegate, Detroit

Centric relation and mandibular movement
LeRoy E. Kurth, Chicago

Denture base materials and reliners
S. Howard Payne, Buffalo

Clinics

Main Exhibition Hall
Tuesday, September 29, 2:30-5:00 P.M.
Thursday, October 1, 2:30-5:00 P.M.

DETROIT CLINIC CLUB
CROWN AND BRIDGE SECTION

Fixed restoration of anterior teeth: technic for completing a bridge for anterior teeth in two appointments

Forrest G. McGuigan, director, Dearborn, Mich.
Frederick E. Fleming, Detroit
John P. Jaxtimer, Detroit
Edmund A. MacArthur, Detroit
Frank J. Orleman, Detroit
Raymond W. Walmoth, Detroit

A.D.A. RESEARCH FELLOWSHIP
NATIONAL BUREAU OF STANDARDS

Resin cements
George C. Paffenbarger, Washington, D. C.

Self-curing resins
Harold J. Caul, Washington, D. C.

Specification testing of dental materials
John W. Stanford, Washington, D. C.

Microstructure of dental amalgam
Denton L. Smith, Washington, D. C.

Clinical camera
Robert J. Nelsen, Washington, D. C.

ANESTHESIA

General anesthesia for operative dentistry for handicapped and recalcitrant patients
Manuel M. Album, Philadelphia

Administration of nitrous-oxide and oxygen using nasopharyngeal and nasotracheal tubes
Alfred J. Ferris, Pittsfield, Mass.

Agents and armamentarium used by a dental anesthetist
Jay H. Mervis, Clairton, Pa.

General anesthesia for operative dentistry
Carl A. Moss, Richmond, Va.

Role of oxygen in general anesthesia
M. Hillel Feldman, New York

Report on 8,000 administrations of nitrous-oxide and oxygen combined with trichloroethylene
Henry A. Thompson, Toronto, Ontario, Canada

Postanesthetic nausea
John H. Heiser, Kansas City, Kan.

Trichloroethylene-ether as an adjunct to nitrous-oxide
James E. Levy, Cleveland

Operative procedures on difficult patients under general anesthesia
Stanley R. Spiro, New York

Administration of general anesthesia in the dental office
Milton S. Travin, Brooklyn

Anesthesia for crippled dental patients
John Graff, Wilmington, Del.
James C. Baker, Wilmington, Del.

General anesthesia in pedodontics
Alexander Wartell, Scranton, Pa.

Trends in local anesthesia
Morris D. Senft, New York

Administration of a local anesthetic combined with a sedative
Allyn S. Abramson, Los Angeles

Intravenous anesthesia for the ambulatory patient
Herbert A. Krasner, Bloomfield, N. J.

ENDODONTICS

Four cardinal principles in endodontics
Harry Albert, New York

Method of treating root canals
Francis J. O'Grady, Chicago

Management of acute alveolar abscess
Morris M. Glasser, Ardmore Park, Pa.

Root canal therapy
George C. Sharp, Pasadena, Calif.

Sterilization of root canals by short wave radiation
Walter S. Phelps, Montreal, Quebec, Canada

Aids in endodontics
Morris B. Auerbach, Brooklyn

Silver wire technic for root canal therapy
James A. Dewberry, Waco, Texas

Endodontic treatment of molar teeth
Samuel Luks, New York

Diffusibility of polyantibiotics through tooth structures
Samuel Turkenkopf, Cedar Grove, N. J.

Culture controls in endodontics
Warren J. Hedman, Bethesda, Md.

Steps in the preparation of the root canal
Raymond L. Hayes, Washington, D.C.

Pulp capping and pulpotomy
Tyler C. Folsom, Cleveland

OPERATIVE DENTISTRY

Rotating dental cutting instruments
Donald C. Hudson, Washington, D. C.
Jack L. Hartley, Washington, D. C.

Rationale and use of the rubber dam
Irvin L. Hunt, Jr., New York

Hygroscopic vacuum investment technic
Joseph A. Casey, Chula Vista, Calif.

Direct method of obtaining wax patterns for three-quarter crowns
Thomas K. Jones, Salina, Kan.

Spring pressure technic for acrylic resin fillings
Totten S. Malson, Cleveland

Amalgam restorations
Fred B. Owen, Corsicana, Texas

Casting from preformed patterns of low-fusing metal
John J. Ruhland, Milwaukee

Relation of composition of teeth to caries
John S. Oartel, Washington, D. C.

Oral pathology in general practice
Robert M. Verklin, Waco, Texas

Crazing and distortion of acrylic resin
Gunnar Ryge, Milwaukee

Technical considerations in amalgam alloy restorations
Russell W. Sumnicht, Washington, D. C.

New method of mixing silicate cement
Alvin H. Grunewald, Great Lakes, Ill.

Proper preparations for amalgam restorations
Alton A. McReynolds, Oklahoma City

Direct method technic for acrylic resin inlays
Roger K. Stockton, Fort Lauderdale, Fla.

Gold inlays
Earl H. Zimmer, Colorado Springs, Colo.

Compound tube impression
Charles J. Miller, Pittsburgh

Using the rubber dam
George W. Ferguson, Great Lakes, Ill.
Martin G. Pesek, Great Lakes, Ill.
Nathan N. Sonin, Great Lakes, Ill.

Gold inlay preparation
Abram R. Weprin, Dayton, Ohio
Harry A. Speert, Dayton, Ohio

An evaluation of the direct filling acrylic resins and silicate cements
Ben Dent, Memphis, Tenn.

Preparation for the three-quarter crown
Walter E. Jones, Minneapolis

Treatment for shock
Louis R. Siegel, Cincinnati

Closure of oroantral fistulae
Clarence A. Dunn, New York

Surgical preparation of mouth for a prosthesis
Albert C. Tuck, Thomasville, Ga.

Oral surgery for the general practitioner
Bertram Blum, Brooklyn

Oral surgery in prosthetic rehabilitation
Jack B. Caldwell, Washington, D. C.

Oral neoplasms
Donald Davidson, Pittsburgh

Diagnosis of neoplasms of the oral cavity
Clarence H. Blackstone, Bethesda, Md.
Robert A. Colby, Bethesda, Md.

Diagnosis and treatment of swellings of the face
Benjamin J. Gans, Chicago

ORAL SURGERY

Oral surgical procedures in a general practice
Haskell Gruber, Hill Air Force Base, Utah

Therapeutics in oral surgery
Arthur O. Christiansen, Milwaukee

Diagnosis and management of oral cysts and tumors
Newton E. Allen, Selma, Ala.

Replantation of completely luxated tooth
John I. Ingle, Seattle

Surgical considerations of complete denture implants
Aaron Gershkoff, Providence, R. I.

Oral surgical problems of the general practitioner
William W. Conklin, Denver

Dentist's responsibility for recognition of oral malignancies
Knut J. Odenheimer, Pittsburgh

Technic of removing lower third molar
Fred S. Blake, Paterson, N. J.

ORTHODONTICS AND ORAL DEVELOPMENT

Normal embryonal development in human teeth
Max J. Wasserman, Milwaukee

Facial harmony gained without loss of bicuspids
Bruce A. Curran, Cleveland

Cephalometric evaluation of facial esthetics in clinical orthodontics
Edward A. Lusterman, Rockville Centre, N. Y.

Initial embryological relationships in respect to fluoridation
Arthur B. Cherney, Milwaukee

Increasing vertical dimension by orthodontic means prior to prosthesis
Sidney J. Zeitz, Brooklyn

Mental hygiene and the orthodontist
James P. Kerrigan, Washington, D. C.

Orthodontics and cleft palate rehabilitation
Russell E. Huber, Dayton, Ohio

Maintaining the integrity of the dental arch
Melvin L. Hunter, Springfield, Mass.

Method for releasing intermaxillary traction in an emergency
Henry J. Kwapis, Niagara Falls, N. Y.

Nonpressure method of constructing acrylic orthodontic appliances
Ralph W. Galem, Boston

PEDODONTICS

Diagnosis and treatment of unerupted teeth
Naomi A. Dunn, New Britain, Conn.
Irving W. Eichenbaum, New Britain, Conn.

Aiding the child in overcoming bad mouth habits
Herbert L. Adelstein, Cleveland

Root canal therapy for deciduous teeth
Louis B. Kelsten, Newark, N. J.

Prosthodontics for children
Chester Lloyd, Memphis, Tenn.

Technics for fixed and removable prosthesis in pedodontics
Albert L. Anderson, San Diego, Calif.

Pulp curettage (3 dimensional movie)
Don B. Chatterton, San Diego

Therapeutic pulpotomies on deciduous molars
Charles J. Mehlum, Phoenix, Ariz.

PERIODONTICS

Medley of periodontal aids and procedures
Ross E. Waltzer, Tulsa, Okla.
Frederick J. Halik, Rochester, N. Y.

Reattachment of periodontal tissues after therapy and principles of splinting for periodontal cases
Max Shapiro, Beverly Hills, Calif.

Wax bite in analyzing and balancing the occlusion
Nathan Allen Shore, New York

Oral manifestations of endocrine disturbances
George W. Burnett, Washington, D. C.

Alkaline hypochlorite as an agent in periodontal therapy
Leon M. Wiesstien, Cleveland

Oral manifestations of systemic disease
Roderick L. Lister, Washington, D. C.

Bite plane: an adjunct in the treatment of periodontal disease
Abraham Berliner, New York

Problem of occlusion in periodontics
John A. Kollar, Jr., Chicago

Diagnosis of periodontal disease from exfoliated gingival cells
Marvin Jacobson, Evanston, Ill.

COMPLETE DENTURES

Diagnosis of cases for correction by surgical prosthesis
Edwin H. Smith, Jr., Washington, D. C.

Prevention of failures in complete dentures
Clarence P. Jaeger, Wichita, Kan.

Locating the hinge axis
Abraham Cohen, Pittsburgh

Method of controlling vertical dimension in complete denture construction
Meyer M. Silverman, Washington, D. C.

Dentures balanced in the mouth
Harold W. Brandenburg, Wauwatosa, Wis.

Technic for immediate dentures
W. Glenn Worstell, Pittsburgh

Temporary immediate dentures
Bruno B. Kielich, Jr., Buffalo, N. Y.

Establishing correct vertical dimension
Carl H. Scheu, Lakewood, Ohio

Maxillofacial prosthesis
Arthur F. Lindquist, Kansas City, Mo.

Subperiosteal prosthodontic implants
Roy L. Bodine, Jr., Camp Gordon, Ga.

Implant dentures
Marshall W. Mueller, St. Paul

Masticatory force exerted with implant dentures
John P. Knowlton, Seattle

Prosthetic considerations for complete denture implants
Norman I. Goldberg, Providence, R. I.

Important factors in the retention of complete dentures
Paul Chung, Chicago

Cast metal base for complete lower denture
James O. Blythe, Baltimore

Reestablishing balanced occlusion after the dentures have been processed
Harold J. Levine, New York

Anterior esthetics in complete dentition
Ernest L. Miller, Montgomery, Ala.

Articulating teeth without use of an articulator
Kenneth G. Campbell, New York

Technic for implant dentures
Alvin D. Padget, Dallas, Texas

Nonanatomical posterior teeth
Ernest L. Pilkington, Detroit

Metal posterior teeth for prosthetic restorations
Harry J. Watson, Sr., Milwaukee

Denture construction
Max Goldstein, New Rochelle, N. Y.

Treatment planning for crown and bridge work
Carlos B. Harmon, Silver Spring, Md.

PARTIAL DENTURES: FIXED AND REMOVABLE

Technic for the construction of a fixed bridge
Matthew Eisenman, Wilmington, Del.

Use of hydrocolloid in occlusal reconstruction
Henry H. McAllister, Wilmington, Del.

Fixed bridgework with universal movement
Robert W. Joffee, Chicago

Copper band impression and transfer technics in crown and bridgework
Irving L. Yalisove, Wilmington, Del.

Hydrocolloid impressions
W. John Benson, Cleveland

Classification and analysis of partial denture problems
Joel Friedman, Brooklyn

Dowel rest attachment in partial denture construction
Fred N. Harris, Pasadena, Calif.

Anterior metallic palate
Grover H. MacLeod, Kelly Air Force Base, Texas

Wrought wire lingual bar framework
Robert W. Roden, Pittsburgh

ROENTGENOLOGY

Problems in roentgenographic examinations of children
Maxwell N. Rockman, Toronto, Ontario, Canada

Minimizing radiation hazards in dental roentgenography
Gerald T. Charbeneau, Gunter Air Force Base, Ala.

Fluorescent tongue pattern and its relation to the deficiency state
Arnold L. Schaffer, Washington, D. C.
Seymour W. Sachs, Washington, D. C.

AMERICAN DENTAL ASSISTANTS ASSOCIATION

The assistant in an orthodontic practice
Martha Summers, Phoenix, Ariz.

Pitfalls in dental roentgenography
Alma McWilliams, North Little Rock, Ark.

Inlay investment technic
Elta Selzer, Colorado Springs, Colo.

Symphony of color
Eleanor Sterling, Dayton, Ohio

The telephone and its potentials
Lois Marquardt, Minneapolis

Personal hygiene
Mary V. McCaskey, Mobile, Ala.

AMERICAN DENTAL HYGIENISTS ASSOCIATION

Daily routine duties of a dental hygienist in a dental office
Helen W. Adams, Atlanta, Ga.

Training of the dental hygienist
Margaret T. Johnson, Corvallis, Ore.

Dental hygiene is my profession
Carolyn R. Sherwin, Detroit

Dental health education in the schools
R. Emily Tracy, Columbus, Ohio

The teen-ager in the dental chair
Lorna J. Bruning, Minneapolis

Toothbrushing technic and visual education
Helen M. Garvey, Detroit

Dental aspects of mental hygiene
Jean Peters, Gowanda, N. Y.

Molar masquerade
Roxie Stitzer, West Liberty State College, Department of Dental Hygiene, West Liberty, W. Va.

A toothbrush cavalcade
Hazel F. Fair, Denver

Dental hygiene in the Stamford public schools
Margaret M. Maher, Stamford, Conn.

Building interest in dentistry for children
Helen D. Robinson, Philadelphia

"Happy," the whispering television puppy
Ida Mae S. Maher, Pittsburgh

The hygienist looks ahead
Nancy Waldeck, Philadelphia

Dental health in industry
Agnes T. White, North Quincy, Mass.
Genevieve Cummings, West Springfield, Mass.

Need for a dental hygienist in a dental practice
Betty Laub, Cleveland
Marlou Ely, Cleveland

Preschool dental health center in Cincinnati
Mildred M. Gilsdorf, Cincinnati

Laboratory technic
Marian L. Whidden, Manchester, N. H.

The Mouth Hygiene Department of the Cleveland Board of Education
Jean Ottmanns, Cleveland
Jane Van Sise

Fones School
V. Bristol Kimber, Westport, Conn.

MISCELLANEOUS

Army central dental laboratory service
Sebastian J. CamPagna, Washington, D. C.

Dental office photography
Paul A. Risk, Lafayette, Ind.

Scientific Exhibits

American Association of Dental Schools
American Association of Dental Schools

Fluoridation of water
American Dental Association

Dental health education materials
American Dental Association

The skillful hand of the dental hygienist
American Dental Hygienists' Association

Achieve your proper weight—and keep it
American Dietetic Association

You and your medical care
Where your medical dollar goes
American Medical Association

Diagnosis and treatment planning—oral and dental disease
Dental Activities, Walter Reed Army Medical Center, Washington, D. C.

Training and research activities of the Oral Pathology Section of the Armed Forces Institute of Pathology
Col. Joseph L. Bernier, Chief, Oral Pathology Section, Armed Forces Institute of Pathology, Washington, D. C.

Periodontal disease—a major dental problem of adults
Walter A. Bossert and Herbert H. Marks, Metropolitan Life Insurance Company, New York

Complete denture balance in function
Jesse V. Boswell, Springfield, Mo.

Tooth form and experimental caries in the rat
Gerald J. Cox, Jessica Nathans, Sara Goodlin and Lucille Soster, Research Department, University of Pittsburgh, School of Dentistry

Dental advertisements in Philadelphia newspapers
Harold L. Faggart, American Academy of the History of Dentistry

Management of the periapical and periodontal tissues
Frank J. Gruchalla, St. Louis

Modern concepts in the prosthetic rehabilitation of cleft palate patients
Cloyd S. Harkins and William R. Harkins, Osceola Mills, Pa., and John F. Harkins, Wesleyville, Pa.

Use of chrome steel in children's dentistry
William P. Humphrey, Denver

Complete mouth rehabilitation
Harry Kazis and Albert J. Kazis, Boston

Speech factors in dentistry
Howard E. Kessler, Cleveland

The temporomandibular joint and the masticatory apparatus in health and disease
Joseph S. Landa and Stuart J. Landa, New York

Gross dentofacial malformations
Jacob C. Lifton, Bellevue Hospital, Hospital for Special Surgery, and Montefiore Hospital, New York

The team approach to the cleft palate and cleft lip problem
Arthur F. Lindquist and David W. Robinson, University of Kansas City, School of Dentistry and School of Medicine

Animal experimentation
National Society for Medical Research and American Medical Association

Relation of aureomycin and enzymatic débridement in dental practice
Lester H. Roth and Gerald J. Cox, University of Pittsburgh, School of Dentistry

Problems and progress of enamel research
Reidar F. Sognnaes, Harvard School of Dental Medicine

Oral lesions in nutritional deficiencies
George Stein and Hyman Gold, New York

Oral and plastic surgery
The Straith Clinic for Oral and Plastic Surgery, Detroit

The diagnosis and treatment of benign and malignant lesions of the oral cavity
Orion H. Stuteville, Loyola University Dental School, Chicago

Processing dental radiographs
A. Porter S. Sweet, Rochester, N. Y.

Fluoridation:

Part 1: Communities that fluoridate their drinking water

Part 2: Grand Rapids study on controlled fluoridation
Public Health Service, U. S. Department of Health, Education and Welfare

Dentistry in civil defense
Federal Civil Defense Administration, American Red Cross, and U. S. Navy Bureau of Medicine and Surgery

United States Air Force Dental Service
Dental Service, Office of the Surgeon General, Department of the Air Force

Anatomy, dentofacial morphology, clinical pathology and preclinical technics
Western Reserve University, School of Dentistry

Dental education justifying time and service for better understanding between patient and dentist
Phillip T. Williams, Anita, Iowa

The architecture of occlusal reconstruction
Theodore Messerman, Cleveland

You can't get blood from a turnip
National Blood Program

Experimental mouth simulating *in vivo* conditions
U. S. Navy

Replantation
University of Washington, School of Dentistry, Seattle

Postextraction bacteremia—a method of prevention
I. B. Bender and R. S. Pressman, Albert Einstein Medical Center, Philadelphia

Artificial acrylic eye, implants and somatoprosthetics
Lt. Col. Stephen Smolczynski, U. S. Army

Education and progress of the certification program
American Dental Assistants Certification Board and American Dental Assistants Association

Motion Pictures

A method of mixing silicate cement
National Bureau of Standards and American Dental Association

Bite correction
Louis Neyman and Edward Koltisko, Washington, D. C.

Construction of full upper and lower dentures, using Stansbery principles and Stansbery tripod
Jack Buchman, Danbury, Conn.

Cranioplasty using acrylic plates
Eduard G. Friedrich, Chicago, and Frank Nash, M.D., Washington, D. C.

Equilibration of occlusion
Department of the Navy, Washington, D. C.

Good dentistry can improve your appearance
Gabriel R. Vogelson, New York

Instrumentation and manipulation of the edgewise arch appliance
Cecil C. Steiner and Fred J. Angel, Beverly Hills, Calif.

Disaster anesthesia
Scientific Film Company, Chicago

Local anesthesia for the lower jaw and teeth
College of Medical Evangelists, School of Dentistry, Los Angeles

Let's keep our teeth
D. & W. Gibbs Ltd., London, England

Mandibular prognathism
University of Minnesota, School of Dentistry

Principles of biopsy
University of Minnesota, School of Dentistry

Surgical and prosthetic procedures for full lower and upper Vitallium dentures
Fred Weitz and A. J. Shapiro, Chicago

The child and his thumb
J. H. Sillman, New York

The porcelain jacket crown
W. Ward Tracy, New York

Vinethene in dental anesthesia
Merck & Co., Inc., Rahway, N. J.

Dento-alveolar surgery: excision of hypertrophied gingivae
Department of the Army, Washington, D. C.

Technical Exhibitors

Abbott Laboratories, North Chicago, Ill.
Ackerman Dental Manufacturing Company, P. O. Box 246, Santa Monica, Calif.
Acralite Company, Inc., 230 West 41st Street, New York
Aderer, Inc., Julius, 219 East 44th Street, New York
Allison Company, W. D., 1133 Burdsal Parkway, Indianapolis
American Consolidated Dental Company, 835 N. 19th Street, Philadelphia
American Medical Association, 535 North Dearborn Street, Chicago
American Sterlizer Company, Erie, Pa.
Ash Sons & Company, U.S.A., Inc., Claudius, 127 Coit Street, Irvington, N. J.
Astra Pharmaceutical Products, Inc., 7½ Neponset Street, Worcester, Mass.
Austenal Laboratories, Inc., 5932 Wentworth Avenue, Chicago

Baker & Company, Inc., 850 Passaic Avenue, East Newark, N. J.
Boos Dental Laboratories, Inc., Henry P., 808 Nicollet Avenue, Minneapolis
Bosworth Company, Harry J., 216 West Jackson Boulevard, Chicago
Bristol-Myers Products Division, 630 Fifth Avenue, New York
Buffalo Dental Manufacturing Company, 775 Main Street, Buffalo
Burton Manufacturing Company, 11201 West Pico Boulevard, Los Angeles
Butler Company, John O., 540 North Lake Shore Drive, Chicago

Castle Company, Wilmot, Rochester, N. Y.
Caulk Company, The L. D., Milford, Del.
Childs Manufacturing Company, 502 Banker Insurance Building, Macon, Ga
Church & Dwight Company, Inc., 70 Pine Street, New York
Cleveland Dental Manufacturing Company, The, 3307 Scranton Road, S.W., Cleveland
Coe Laboratories, Inc., 6033 Wentworth Avenue, Chicago
Coles Corporation, 3212 Market Street, Philadelphia
Columbia Dentoform Corporation, 131 East 23rd Street, New York
Columbus Dental Manufacturing Company, The, 634 Wager Street, Columbus
Condit, P. N., Box 42, Boston
Cook-Waite Laboratories, Inc., 1450 Broadway, New York
Coreco Research Corporation, 1908 Broadway, New York
Corega Chemical Company, 76 Mills Road, Jersey City
Cosmos Dental Products, Inc., 653 11th Avenue, New York
Crescent Dental Manufacturing Company, 1839 South Pulaski Road, Chicago

Densco, Incorporated, P. O. Box 420, 200 Santa Fe Drive, Denver
Dental Development and Manufacturing Corporation, 653 Washington Avenue, Brooklyn
Dental Perfection Company, 543 Arden Avenue, Glendale, Calif.
Denticator Company, Inc., The, 1068 Mission Street, San Francisco
Dentists' Supply Company of New York, The, 500 West College Avenue, York, Pa.
Dudley Research Corporation, 18 West 27th Street, New York
Du Pont de Nemours and Company, E. I., 10th and Market Streets, Wilmington, Del.
Durallium Products Corporation, 809 West Washington Boulevard, Chicago

Eastman Kodak Company, 343 State Street, Rochester, N. Y.
Emesco Dental Company, 150 Fifth Avenue, New York
Evenflo, Pyramid Rubber Company, Ravenna, Ohio

Fleet Company, Inc., C. B., Lynchburg, Va.
Friedman Specialty Company, 7 South Dearborn Street, Chicago
Fruit-O-Matic Manufacturing Company, 5225 Wilshire Boulevard, Los Angeles
Funk Company, Carl H., Box 268, Warsaw, Ind.

General Electric Company, X-Ray Department, 4855 Electric Avenue, Milwaukee
Getz Corporation, William, 7512 South Greenwood Avenue, Chicago
Graham Chemical Corporation, 129-21 Merrick Boulevard, Springfield Gardens, N.Y.

Hall Dental Products Company, 210 Throop Avenue, Brooklyn
Hamilton Manufacturing Company, Two Rivers, Wis.
Hanau Engineering Company, 1233 Main Street, Buffalo

Handler & Son, Edward, 86-90 North Avenue, Garwood, N. J.
Hatch Company, Inc., B. G., 24 Lawrence Street, Brooklyn
Hirsch Dental Company, Henry H., 3407 Milverton Road, Cleveland
Hudson Products, 111 Academy Street, Jersey City
Hu-Friedy, Inc., 3118 North Rockwell Street, Chicago
Hygienic Dental Manufacturing Company, 31 West Market Street, Akron, Ohio

Interstate Dental Company, Inc., 220 West 42nd Street, New York

Jelenko & Company, Inc., J. F., 136 West 52nd Street, New York
Johnson & Johnson, Dental Division, New Brunswick, N. J.
Jordan Engineers, P. O. Box 4913, Jacksonville, Fla.
Justi & Son, Inc., H. D., 32nd and Spring Garden Streets, Philadelphia

Kerr Manufacturing Company, 6081 12th Street, Detroit

Lactona, Incorporated, 236 East 9th Street, St. Paul
Lea & Febiger, 600 South Washington Square, Philadelphia
Lederle Laboratories Division, American Cyanamid Company, 30 Rockefeller Plaza, New York
Lippincott Company, J. B., East Washington Square, Philadelphia
Luxene, Incorporated, 118 East 25th Street, New York

Manhattan Uniform Company, 509 South Wabash Avenue, Chicago
McCaldry, Incorporated, 5214 East 12th Street, Oakland, Calif.
McKesson Appliance Company, 2228 Ashland Avenue, Toledo, Ohio
Medical Protective Company, Fort Wayne, Ind.
Merck & Company, Inc., Rahway, N. J.
Midwest Dental Manufacturing Company, 4439 West Rice Street, Chicago
Minimax Company, The, 5905 North Clark Street, Chicago
Mizzy, Inc., 304 East 23rd Street, New York
Mosby Company, C. V., 3207 Washington, St. Louis
Moskey & Geiss Dental Laboratories, Huron-Ninth Building, P. O. Box 5938, Cleveland
Moyer Company, Inc., The J. Bird, 117-121 North 5th Street, Philadelphia
Myerson Tooth Corporation, 90 Hamilton Street, Cambridge, Mass.

National Dairy Council, 111 North Canal Street, Chicago
Ney Company, The J. M., 71 Elm Street, Hartford, Conn.
Nobilium Products, Inc., 125 North Wabash Avenue, Chicago
North American Philips Company, Inc., 750 South Fulton Avenue, Mount Vernon, N. Y.
Novocol Chemical Manufacturing Company, Inc., 2911-23 Atlantic Avenue, Brooklyn
Nu-Dent Porcelain Studio, Inc., 220 West 42nd Street, New York

Ohio Chemical and Surgical Equipment Company, A Division of Air Reduction Company, Inc., 1400 East Washington Avenue, Madison, Wis.
Oral B Company, 448 South Market Street, San Jose, Calif.
O'Rourke Diamond Company, 11423 Van Owen Street, North Hollywood, Calif.
Overseas Scientific Corporation, 137 E. 57th Street, New York

Peerless Appliance Company, Inc., 126 Eleventh Avenue, New York
Pelton & Crane Company, The, 632 Harper Avenue, Detroit
Pfingst & Company, Inc., 62 Cooper Square, New York
Pfizer and Company, Inc., Charles, 630 Flushing Avenue, Brooklyn
Philosophical Library, Inc., 15 East 40th Street, New York
Poloris Company, Inc., 109 Academy Street, Jersey City
Precious Metals Research Works, Inc., 230 West 41st Street, New York
Precision Attachments Company, 507 E. 34th Street, Indianapolis
Premier Dental Products Company, 1001 Chestnut Street, Philadelphia
Professional Budget Plan, Madison, Wis.
Professional Dental and Manufacturing Company, 5043 North Damen Avenue, Chicago
Professional Products Company, P. O. Box 1628, San Diego
Prometheus Electric Corp., The, 50 Webster Avenue, New Rochelle, N. Y.
Pro-phy-lac-tic Brush Company, Florence, Mass.
Pycopé, Incorporated, 392 Wayne Street, Jersey City

Ransom & Randolph Company, P. O. Box 905, Toledo, Ohio
Reliance Dental Manufacturing Company, 22 East Van Buren Street, Chicago
Replident Dental Manufacturing Co., 430 University Ave., San Diego

Rhodes Dental Loupes, Gate, Wash.
Richmond Dental Cotton Company, P. O. Box 2176, Charlotte, N. C.
Rinn X-Ray Products, Inc., 2929 North Crawford Avenue, Chicago
Ritter Company, Inc., P. O. Box 848, Rochester, N. Y.
Rocky Mountain Metal Products Company, 1450 Galapago Street, Denver, Colo.
Rota-Seat, Inc., 4606 West 21st Street, Berwyn, Ill.
Rower Dental Manufacturing Corporation, 2 Park Square, Boston

Saddle-Lock, Inc., 383 Pearl Street, Brooklyn
Saunders Company, W. B., West Washington Square, Philadelphia
Schaefer, Oskar, 1 Wilkinson Avenue, Jersey City
Smith Company, Lee, 842 North Wells, Chicago
Sorg Paper Company, The, Middletown, Ohio
Speedlight Center, 128 West 32nd Street, New York
Spyco Smelting and Refining Company, 55 South 3rd Street, Minneapolis
Squibb & Sons, E. R., Division of Mathieson Chemical Corp., 32-14 Northern Boulevard, Long Island City, N. Y.
Star Dental Manufacturing Company, Inc., S. E. Corner 58th and Market, Philadelphia
Stalite Inc., 4170 Park Avenue, New York
Stern & Company, Inc., I., 320 Washington Street, Mount Vernon, N. Y.
Stratford-Cookson Company, 261-263 South 3rd Street, Philadelphia
Surgident, Ltd., 2124 South Sepulveda Boulevard, West Los Angeles, Calif.

Tenak Products Company, 2615 North Paulina Street, Chicago
Ticonium, 413 North Pearl Street, Albany, N. Y.
Tiffany Diamond Instruments, Box 511, Tujungo, Calif.
Toledo Dental Products Company, The, 1009 Jackson Street, Toledo, Ohio
Torit Manufacturing Company, 292 Walnut Street, St. Paul

Union Broach Company, Inc., 37 West 20th Street, New York
Union Dental Company, 3201 Arch Street, Philadelphia
Universal Dental Company, 48th and Brown Streets, Philadelphia

Vernon-Benshoff Company, P. O. Box 1587, Pittsburgh

Walden Industries, Inc., 350 West 50th Street, New York
Wallace & Tiernan Company, Inc., Box 178, Newark, N. J.
Weber Dental Manufacturing Company, The, 2206 13th Street, N.E., Canton, Ohio
Wernet Dental Manufacturing Company, Inc., 105 Academy Street, Jersey City
Wessler Manufacturing Company, E. F., 3171 West 106th Street, Cleveland
Whip-Mix Corporation, 411 West Avery Avenue, Louisville, Ky.
White Dental Manufacturing Company, S. S., 211 South 12th Street, Philadelphia
Whitehall Pharmacal Company, 22 East 40th Street, New York
Williams Gold Refining Company, Inc., 2978 Main Street, Buffalo

X-Ray Manufacturing Corporation of America, 222 Bowery, New York

Z. F. Manufacturing Company, Inc., 9207 Flatlands Avenue, Brooklyn

Meetings of A.D.A. Agencies

Board of Trustees • Hotel Statler, Ohio Room, September 21-30, October 1.

Council on Constitution and Bylaws • Hotel Statler, Parlor E, September 27, 9 A.M. to 5 P.M.

Council on Dental Health: Conference on Dental Health Problems • Hotel Statler, Euclid Room, September 26, 9 A.M. to 5 P.M.

Council on Scientific Session: Meeting with Section Officers. • Hotel Cleveland, Rose Room, September 27, 8 A.M.

Council on Scientific Session: Reception for Clinicians and Essayists • Hotel Cleveland, Red Room, September 28, 5 to 7 P.M.

House of Delegates • Hotel Statler, Grand Ball Room, September 28, 30 and October 1.

Past Presidents' Luncheon • Hotel Statler, Parlor B, September 30, 12 noon.

State Society Officers Conference • Hotel Statler, Euclid Room, September 27, 9 A.M. to 5 P.M.

State Society Officers Luncheon • Hotel Statler, Pine Room, September 27, 12:30 P.M.

Meetings of Trustee District Delegations

First District • Hotel Statler, Parlor B, September 28, 8:00 A.M., breakfast meeting. Charles I. Taggart, 139 Bank Street, Burlington, Vt., trustee.

Second District • Hotel Statler, Parlor 345, September 27-30, October 1, headquarters. Percy T. Phillips, 18 East 48th Street, New York, trustee.

Third District • Hotel Statler, Parlor L, September 30, 8:00 A.M., breakfast meeting. W. Earle Craig, 8113 Jenkins Arcade, Pittsburgh, trustee.

Fourth District • Hotel Statler, Parlor E, September 28, 8:00 A.M., breakfast meeting. Daniel F. Lynch, 1678 Primrose Road, N.W., Washington, D. C., trustee.

Fifth District • Hotel Statler, Tavern Room, September 30, 8:00 A.M., breakfast meeting. James E. John, Medical Arts Building, Roanoke, Va., trustee.

Sixth District • Hotel Statler, Parlor L, September 28, 8:00 A.M., breakfast meeting. Arthur F. Schopper, Professional Building, Kansas City, Mo., trustee.

Seventh District • Hotel Statler, Parlor L, September 28, 3:00 P.M., caucus meeting; Hotel Statler, Parlor E, September 30, 8:00 A.M., breakfast meeting. Earl G. Jones, 185 East State Street, Columbus, Ohio, trustee.

Eighth District • Hotel Statler, Pine Room, September 28 and September 30, 8:00 A.M., breakfast meetings. L. H. Jacob, Jefferson Building, Peoria, Ill., trustee.

Ninth District • Hotel Statler, Parlor C, September 28, 8:00 A.M., breakfast meeting. Obed H. Moen, Masonic Temple, Watertown, Wis., trustee.

Tenth District • Hotel Statler, Parlor D, September 28 and September 30, 8:00 A.M., breakfast meeting. Lewis W. Thom, Medical Arts Building, Minneapolis, trustee.

Eleventh District • Hotel Statler, Tavern Room, September 28, 8:00 A.M., breakfast meeting. Clarence S. Renouard, Phoenix Building, Butte, Mont., trustee.

Twelfth District • Hotel Statler, Parlor 341, September 28, 8:00 A.M., breakfast meeting. William R. Alstadt, Boyle Building, Little Rock, Ark., trustee.

Thirteenth District • Hotel Statler, Euclid Room, September 28, 7:45 A.M.; Parlor C, September 30, 7:45 A.M.; breakfast meetings. Bernerd C. Kingsbury, 490 Post Street, San Francisco, trustee.

Meetings of Groups in the Dental Field

Advisory Board of Dental Specialists • Hotel Statler, Parlor B, September 27. Alvin H. Grunewald, Naval Hospital, Great Lakes, Ill., secretary.

American Academy of the History of Dentistry • Hotel Statler, Parlor C, September 26. Harold L. Faggart, 2120 Pine Street, Philadelphia, secretary.

American Academy of Periodontology • Hotel Cleveland, September 24-26. Clarke E. Chamberlain, 115 North Street, Peoria, Ill., secretary.

American Academy of Gold Foil Operators • Hotel Carter, September 26. Gerald D. Stibbs, University of Washington, School of Dentistry, Seattle, secretary.

American Academy of Implant Dentures • Allerton Hotel, September 27. Philip S. Loechler, Dental Clinic, Camp Gordon, Ga., secretary.

American Association of Dental Editors • Hollenden Hotel, September 26. Lewis M. Bumgardner, 4 H Doctor's Building, Charlotte, N. C., secretary.

American Association of Dental Examiners • Hotel Statler, Pine Room, September 25, 26. Carl A. Bumstead, 924 Stuart Building, Lincoln, Neb., secretary.

American Association of Dental Schools • Hotel Statler, Parlor E, September 26. Marion W. McCrea, 42 South Greene Street, Baltimore, secretary.

American Association of Public Health Dentists • Hotel Carter, September 27. Roy D. Smiley, 1330 West Michigan Street, Indianapolis, secretary.

American College of Dentists • Hotel Cleveland, September 27. Otto W. Brandhorst, 4952 Maryland Avenue, St. Louis, secretary.

American Dental Assistants Association • Hollenden Hotel, September 28-30, October 1. Mary L. Martin, 410 First National Bank Building, LaPorte, Ind., executive secretary.

American Dental Hygienists' Association • Allerton Hotel, September 26-30, October 1. Margaret E. Swanson, 1735 Eye Street, N.W., Washington, D. C., executive secretary.

American Denture Society • Hollenden Hotel, September 25, 26. Arthur L. Roberts, Aurora National Bank Building, Aurora, Ill., secretary.

American Society of Dentistry for Children • Hotel Carter, September 25-27. Henry M. Wilbur, 129 East Broadway, Louisville, secretary.

Association of American Women Dentists • Hotel Carter, September 27-30, October 1. Florence Rich, 6508 Delmar Boulevard, St. Louis, secretary.

International College of Dentists • Hotel Statler, Euclid Room, September 27. Elmer S. Best, 801 Medical Arts Building, Minneapolis, recorder.

National Association of Seventh-Day Adventist Dentists • Allerton Hotel, September 25-27. Franklyn C. Nelson, Progress Bulletin Building, Pomona, Calif., secretary.

American Dental Golf Association • Hotel Cleveland, September 26-28. Thomas G. McMahon, 11777 Mississippi Avenue, Los Angeles, executive secretary.

Loyola University (Chicago) Dental Alumni Association • Hotel Cleveland, Rose Room, September 30, 7:30 A.M., breakfast meeting. Raymond Van Dam, 42 East 112th Street, Chicago, secretary.

Meetings of Fraternal Groups

Alpha Omega • Hollenden Hotel, September 26-28. H. Sedran, 41 East 19th Street, New York, secretary.

Delta Sigma Delta • Hotel Cleveland, September 25-28. Stephen G. Applegate, 4660 Buckingham Road, Detroit, scribe.

Psi Omega • Hotel Statler, September 28, Euclid Room. William S. Harman, 59 East Madison Street, Chicago, secretary.

Xi Psi Phi • Hotel Carter, September 28. William E. Koch, Jr., 508 North Grand Boulevard, St. Louis, secretary.

Social Events

PRESIDENT'S DINNER

President and Mrs. Otto W. Brandhorst will be honored at the President's Dinner, social highlight of the 94th annual session, to be held at 7:30 P.M., Wednesday, September 30, in the Grand Ball Room of the Statler Hotel.

Music and entertainment at the banquet will be presented by Jack Morton's orchestra, which has entertained at the past two annual sessions. Preceding the dinner a dutch treat cocktail hour is to be held in the adjacent Pine Room.

Tickets at $7.00 per plate may be purchased in advance from Samuel Cohen, 710 Carnegie Hall Building, Huron Road, Cleveland 15. During the annual session tickets will also be available at various information centers. As attendance will be limited, reservations will be made in the order requests are received.

WOMEN'S LUNCHEONS

A luncheon followed by entertainment will be held at noon Tuesday, September 29, in the Rainbow Room of the Carter Hotel. Attendance will be limited. Tickets at $4.00 may be obtained now by mailing a reservation request and check to Mrs. H. J. Hoppe, 710 Carnegie Hall Building, Huron Road, Cleveland 15.

On Monday, September 28, a luncheon will be served at the General Electric Lighting Institute and a program on modern lighting will be presented. Bus transportation will be provided to Nela Park, home of the Institute, and back to the Statler and Cleveland Hotels. Tickets for the tour and luncheon may be purchased for $2.50 from Mrs. H. J. Hoppe at the address noted above.

INTERNATIONAL BRUNCH

A brunch for the wives of international guests and other special guests will be given at 10:30 A.M. Wednesday, September 30, by the women's entertainment committee at the Woman's City Club, Bulkley Building.

SIGHTSEEING TOUR

The eminent Cleveland Health Museum and the Art Museum will be included in the itinerary of a sightseeing tour of Cleveland scheduled for Wednesday, September 30. The bus tour will leave from the Statler Hotel at 1:00 P.M. Tickets for this tour are $1.00 and may be purchased at any information center during the annual session.

FRATERNITY DINNERS

On the first evening of the annual session, September 28, the following dental fraternities will hold their banquets:

Alpha Omega, Hollenden Hotel
Delta Sigma Delta, Cleveland Hotel
Psi Omega, Statler Hotel
Xi Psi Phi, Carter Hotel

OTHER EVENTS

The annual golf tournament of the American Dental Golf Association will be conducted Monday, September 28, at the Cleveland Country Club, which was the scene of the National Amateur in 1935 and is one of the best-known courses in the country. Dentists who wish to participate may register September 26-27 at the golf desk in the lobby of the Cleveland Hotel.

After the tournament prizes and trophies will be awarded at a dinner to be held at 7:00 P.M. at the Cleveland Hotel.

The Calcutta Pool Cocktail Party and Dinner, an event for men only, will be held at 6:00 P.M. Sunday, September 27, in the Cleveland Hotel.

The famed Orpheus Male Chorus will entertain at the annual dinner of the American College of Dentists, to be held on the evening of Sunday, September 27 at the Cleveland Hotel.

The annual dinner of the International College of Dentists will also be held Sunday, September 27, at the Statler.

House of Delegates

Lyons, Harry, Medical College of Virginia, Richmond, Va., speaker
Hillenbrand, Harold, 222 East Superior Street, Chicago, secretary

Ex-officio members

Brandhorst, Otto W., 4952 Maryland Avenue, St. Louis, president
FitzGerald, Leslie M., 718 Roshek Building, Dubuque, Iowa, president-elect
Westhoff, Henry F., Missouri Building, St. Louis, first vice-president
Pierson, F. A., 1112 Federal Securities Building, Lincoln, Neb., second vice-president
O'Keefe, John A., 1801 K Street, N.W., Washington, D. C., third vice-president
Lyons, Harry, Medical College of Virginia, Richmond, Va., speaker
Hillenbrand, Harold, 222 East Superior St., Chicago, secretary
Camalier, C. Willard, 1726 Eye Street, N.W., Washington, D. C., assistant secretary
Cruttenden, Louis M., 222 East Superior Street, Chicago, assistant secretary
Washburn, H. B., Lowry Medical Arts Building, St. Paul, treasurer
Morrey, Lon W., 222 East Superior Street, Chicago, editor

Trustees

Jones, Earl G., 185 East State Street, Columbus, Ohio
Schopper, A. F., 914 Professional Building, Kansas City, Mo.
Taggart, Charles I., 139 Bank Street, Burlington, Vt.
Thom, Lewis W., 1546 Medical Arts Building, Minneapolis
Alstadt, William R., 610 Boyle Building, Little Rock, Ark.
Kingsbury, Bernerd C., 490 Post Street, San Francisco
Phillips, Percy T., 18 East 48th Street, New York
Renouard, Clarence S., 304 Phoenix Building, Butte, Mont.
Craig, W. Earle, 8113 Jenkins Arcade, Pittsburgh
Jacob, L. H., Jefferson Building, Peoria, Ill.
John, James E., Medical Arts Building, Roanoke, Va.
Lynch, Daniel F., 1678 Primrose Road, N.W., Washington, D. C.
Moen, Obed H., Watertown, Wis.

Past Presidents

Brown, Homer C., 1816 Franklin Avenue, Columbus, Ohio
Volland, Roscoe H., First National Bank Building, Iowa City
Casto, Frank M., 801 Silverado Street, La Jolla, Calif.
Miner, LeRoy M. S., 363 Marlborough Street, Boston
Camalier, C. Willard, 1726 Eye Street, N. W., Washington, D. C.
Ward, Marcus L., 1308 Cambridge Road, Ann Arbor, Mich.
Merritt, Arthur H., 580 Fifth Avenue, New York
*Oliver, Oren A., 1915 Broadway, Nashville, Tenn.
Robinson, J. Ben, School of Dentistry, West Virginia University, Morgantown, W. Va.
*Wells, C. Raymond, One DeKalb Avenue, Brooklyn
Mead, Sterling V., 1149 16th Street, N.W., Washington, D. C.
Washburn, Harvey B., 488 Lowry Medical Arts Building, St. Paul
Minges, Clyde E., Peoples Bank Building, Rocky Mount, N. C.
Adams, Philip E., 106 Marlborough Street, Boston
Oppice, Harold W., 1002 Wilson Avenue, Chicago
Ennis, LeRoy M., 4001 Spruce St., Philadelphia

*Serving as an elected delegate.

Members

ALABAMA

Delegates

Goodwin, W. E., 307 First National Bank Building, Montgomery
Kirkland, Olin, 722 Shepherd Building, Montgomery
Llewellyn, M. L., Philipson Building, Gadsden
McGavock, R. J., 914 Woodward Building, Birmingham

Alternates

Strong, L. B., Jr., 2911½ North 27th Street, Birmingham
Wood, W. A., Merchants National Bank Building, Mobile
Dillon, L. B., 914 Woodward Building, Birmingham
Goodall, R. E., Philipson Building, Gadsden

ALASKA

Delegate

Miller, John E., Box 847, Spenard

Alternate

Seeley, Lawlor J., Anchorage

ARKANSAS

Delegates

Hamm, Don M., P.O. Box 89, Clarksville
Moseley, Hugh, Warren
Smith, Thermon B., 610 Boyle Building, Little Rock

Alternates

Flickinger, H. M., Siloam Springs
Golden, Roy F., Arkadelphia
Gunn, J. V., 2723 Kavanaugh, Little Rock

CALIFORNIA

Delegates

Schraft, Robert O., 450 Sutter Street, San Francisco
Benediktson, John B., 1624 Franklin Street, Oakland
Cunningham, Mervin G., 2240 Channing Way, Berkeley
Gray, Charles F., 412 Medico-Dental Building, Sacramento
Harrison, Walter C., 209 Post Street, San Francisco
Herz, Francis J., 450 Sutter Street, San Francisco
Inskipp, E. Frank, 344 Fourteenth Street, San Francisco
Jenkins, Kenneth M., 111 Sutter Street, San Francisco
Leach, Edmund J., 464 South Main Street, Salinas
Ludwigsen, Lawrence R., 450 Sutter Street, San Francisco
Smith, William S., 450 Sutter Street, San Francisco
Soderstrom, Ernest F., 1024 J. Street (Beaty Building), Modesto
Taber, Loren B., 450 Sutter Street, San Francisco

Alternates

Kingsbury, B. C., Sr., 490 Post Street, San Francisco
Petray, Henry C., 1904 Franklin Street, Oakland

SOUTHERN CALIFORNIA

Delegates

Saunders, A. E., 1145 Locust, Long Beach
Abel, John R., 405 North Bedford Drive, Beverly Hills
Steen, John F., 2290 6th Avenue, San Diego
James, Allison G., 409 North Camden Drive, Beverly Hills
Kurtz, Bruce R., 960 East Green Street, Pasadena
Ralston, Melvin E., Medico-Dental Building, Pomona
Openshaw, Rulon W., 6703 Melrose Avenue, Los Angeles
Tylicki, B. M., 547 East Broadway, Long Beach
Rounds, Jack, 3875 Wilshire Boulevard, Room 603, Los Angeles
Hales, Lock, 229 North Central, Glendale
Wilson, John B., 5225 Wilshire Boulevard, Los Angeles
Jones, J. Lorenz, 405 North Bedford Drive, Beverly Hills
Monia, Walter J., 329 North Wetherly Drive, Beverly Hills
Moss, C. Albert, 1401 South Hope Street, Los Angeles
Tennis, Phillip J., 3875 Wilshire Boulevard, Los Angeles
Harding, J. C. A., 311 Nutmeg, San Diego
Paul, Cassius, 325 North Broadway, Santa Ana

Alternates

Engholm, Joseph J., 234 East Colorado, Pasadena
Bleecker, Harry H., 1625 Chelsea Road, San Marino
Jones, Howard V., 6114 Franklin Avenue, Los Angeles
White, John J., 2111 Eighteenth Street, Bakersfield
Openshaw, Lynn, 1126 Roosevelt Building, Los Angeles
Wingfield, L. A., 7024 Melrose Avenue, Hollywood
Kulstad, Hugo M., 1807 26th Street, Bakersfield
McNulty, R. W., 925 West 34th Street, Los Angeles
Silverman, S. Mayo, 5410 Wilshire Boulevard, Los Angeles
Over, Dale, 603 First Trust Building, Pasadena
Ziegler, J. Eugene, 3875 Wilshire Boulevard, Los Angeles
Waggoner, Rex R., 10742 Riverside Drive, North Hollywood
Gilman, C. W., 219 East Eighth Street, National City
Summers, Francis W., 662 South Western Avenue, Los Angeles
Pincus, Charles L., 9629 Brighton Way, Beverly Hills
Dailey, James S., 3780 Wilshire Boulevard, Los Angeles
Abramson, Allyn, 6363 Wilshire Boulevard, Los Angeles

COLORADO

Delegates

Elofson, Laurence T., Monte Vista
Downs, Robert A., 1422 Grant Street, Denver
Proctor, Hobart H., 412 Metropolitan Building, Denver
Grove, Kenneth F., 3705 East Colfax Avenue, Denver

Alternates

Dwire, George J., Exchange National Bank Building, Colorado Springs
Peabody, Jess M., 512 Metropolitan Building, Denver
Humphrey, William Roy, 1232 Republic Building, Denver
Gibson, Ralph R., 1124 Republic Building, Denver

CONNECTICUT

Delegates

MacDonald, Alan L., 302 State Street, New London
Chernoff, Phillip M., 154 Broad Street, Middletown
Gillroy, Kenneth M., 65 South Street, Stamford
Arnold, Earle S., 37 Linnard Road, West Hartford
Gengras, Alfred J., Jr., 750 Main Street, Hartford
Harold, Frederic S., 291 Whitney Avenue, New Haven
Englander, Jesse J., 76 John Street, Bridgeport
Hicks, Henry, 5 Glen Court, Greenwich

Alternates

Bebbe, Ira Dow, 189 State Street, Bridgeport
Siegal, Louis R., 750 Main Street, Hartford
Barnes, Francis P., 108 Bank Street, Waterbury
Peterson, Clarence E., 9 Elm Street, Rockville
Quinn, Henry T., 255 Greenwich Avenue, Greenwich
Bray, Joseph A., 15 Grennan Road, West Hartford
McLaughlin, Albert A., 616 Medical Building, Bridgeport
Bernert, Robert H., 242 Trumbull Street, Hartford

DELAWARE

Delegates

Musselman, Paul K., 143 West Main Street, Newark
Nelson, Clyde, L. D. Caulk Company, Milford

Alternates

Kreshtool, Louis, 1700 Washington Street, Wilmington
Mach, Joseph, 216 Pine Street, Seaford

DISTRICT OF COLUMBIA

Delegates

Leifer, Edward D., Colorado Building, Washington
Fitzgibbon, David J., 601 19th Street, N.W., Washington
Reilly, J. Garrett, 2401 North Capitol Street, Washington
Ingersoll, William B., 1220 16th Street, N.W., Washington

Alternates

O'Keefe, John A., 1801 "K" Street, N.W., Washington
Rault, C. V., 2017 44th Place, N.W., Washington

Colvin, E. Milburn, Jr., 1726 21st Street, N.W., Washington
Michales, Manly, 915 19th Street, N.W., Washington

FLORIDA

Delegates

Brown, Coleman T., 601-2 Citizens Building, Tampa
Gillespie, Rupert H., 609 Citizens Bank Building, West Palm Beach
Kellner, A. W., P.O. Box 155, Hollywood, Florida
Meyer, Frank P., 602 Hall Building, St. Petersburg
Thoburn, Robert, 227 Orange Avenue, Daytona Beach

Alternates

Carroll, Bryant S., 706 Professional Building, Jacksonville
Perdigon, Gustave J., First National Bank Building, Tampa
Stewart, Clad C., 709 Power and Light Building, St. Petersburg
Taylor, R. P., Jr., 115 Five Points Medical Center, 800 Lomax at Oak, Jacksonville
Wilson, Byron G., 1700 MacDill Avenue, Tampa

GEORGIA

Delegates

Tuck, Albert C., Thomasville
Garrett, William A., 833 Candler Building, Atlanta
Wilson, F. H., Griffin
Banks, W. H., Montezuma
Johnston, Charles L., Canton

Alternates

Yarbrough, C. A., 717 Bibb Building, Macon
Drew, William P., Brunswick
Yarbrough, Sidney H., 12 Medical Arts Building, Columbus
Maxwell, Vaughn, 623 Greene Street, Augusta
Robinson, Robert D., 832 Candler Building, Atlanta

HAWAII

Delegates

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Sandberg, Floyd A., 280 Lewer Road, Honolulu, T. H.

Alternates

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Dawe, John H., 810 North Vineyard Street, Honolulu 17, T. H.

IDAHO

Delegates

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Cutler, Allen R., 401 Idaho Street, Boise

ILLINOIS

Delegates

Mahoney, J. E., 218 East Ferguson Avenue, Wood River
Gresens, Werner J., 1011 Lake Street, Oak Park
Blunk, R. E., 505 Myers Building, Springfield
Clopper, Paul W., 623 Jefferson Building, Peoria
Starshak, T. C., 753 East 79th Street, Chicago
Becherer, C. K., 223 East Washington Street, East Peoria
Brady, William B., Room 209, Adams Building, Danville
Collins, Edmund M., 104 West Clark Street, Champaign
Ebert, Elmer, 10058 Ewing Avenue, Chicago
Graham, F. W., Jr., 822 West Fremont Avenue, Morris
Hughes, Luther Walter, 55 East Washington Street, Chicago
Hundley, Robert A., 3915-A Waverly Avenue, East St. Louis
Isenberger, C. F., Lanark
Kleiman, S. R., 2348 North Western Avenue, Chicago
Luebke, E. W., 3166 Lincoln Avenue, Chicago
Madda, C. J., 25 East Washington Street, Chicago
Miller, G. M., 715 Lake Street, Oak Park
Pollock, Robert J., 5615 West Lake Street, Chicago
Silberhorn, Otto M., 311 East Chicago Avenue, Chicago
Solfronk, G. W., 3125 West 63rd Street, Chicago
Tarpley, Hugh M., W.C.U. Building, Quincy
Tolar, William F., 6804 Windsor Avenue, Berwyn
Vogelei, George B., 315 Second National Bank Building, Freeport
Wells, R. J., 1525 East 53rd Street, Chicago
Witthofft, W. F., 413 5th Street, Wood River
Zwisler, John A., 189 East Court Street, Kankakee

Alternates

Ausbrook, Eugene K., 410 Spivey Building, East St. Louis

Opdahl, Olaf S., 6280 West North Avenue, Chicago
Lauder, Charles E., East Broadway at 1st Street, Monmouth
Vessell, James H., 302 Roland Building, Bloomington
Zielinski, Joseph B., 3147 Logan Boulevard, Chicago
Fitz, George H., Sterry Block, Pontiac
Wolfe, Dudley A., Citizens Building, Decatur
Baughman, D. C., P.O. Box 29, Mattoon
Carlton, J. R., 2612 East 75th Street, Chicago
Rock, Robert J., Lockport
Sowle, William H., 119 North Church Street, Rockford
Vickers, Earl K., Darner Building, Granite City
Tuck, Robert F., 4010 West Madison Street, Chicago
Cupis, Basil A., 4554 Broadway, Chicago
Baumann, E. W., 108 North Evergreen Avenue, Arlington Heights
Porto, Joseph F., 25 East Washington Street, Chicago
Humphrey, Robert I., 185 North Wabash Avenue, Chicago
Smith, R. H., 119½ South Lafayette Street, Macomb
Boothe, Russell G., 4753 Broadway, Chicago
Hill, Ozro D., 601 State Bank Building, Freeport
Cahill, Leo J., 108 South Pulaski Road, Chicago
Stocke, A. E., Carmi
Danforth, Harry D., Box 114, Cissna Park

INDIANA

Delegates

Crum, Walter A., 514 West Main Street, Richmond
Kelly, W. N., 806 Blackman, Clinton
Ewbank, E. E., Box 96, Kingman
Asher, Paul H., 3801 Broadway, Gary
Hine, Maynard K., 1121 West Michigan Street, Indianapolis
McNulty, Wilbur P., 3501 South Harrison Street, Fort Wayne
Baker, Frederick C., 508 Calumet Building, Hammond
Montgomery, E. A. W., 1006 Hulman Building, Evansville
Griswold, J. H., 218 Medical Arts Building, Richmond

Alternates

Beeson, John H., 103½ North Washington Street, Crawfordsville
Mayfield, C. T., 306 Armstrong Landon Building, Kokomo
Risk, Paul A., 401 Schultz Building, Lafayette
Branson, M. D., 2211 West Franklin Street, Evansville
Shoemaker, W. R., 517 Citizens Bank Building, Anderson
Wheeler, L. O., 230 Blackman Street, Clinton
Border, Samuel L., Monon
Hayden, Hughe C., 5231 Hohman Avenue, Hammond
Schoenherr, Eldo H., 1525 Oxford Street, Fort Wayne

IOWA

Delegates

Stonebrook, H. W., Eldora
Berney, J. E., 425 Davenport Bank Building, Davenport
Larson, L. N., 432 Carver Building, Fort Dodge
Foster, J. E., Hampton
Goen, D. J., Manchester
Wilson, Harry I., 639 Insurance Exchange Building, Des Moines
Anderson, G. C., Avoca

Alternates

Eaton, E. M., 1011 American Trust Building, Cedar Rapids
Hoffman, K. R., Algona
Bridge, F. C., Storm Lake
Altfillisch, H. J., 722 Roshek Building, Dubuque
Scott, W. L., I.S.S. Bank Building, Clinton
Carl, C. E., 503 First National Bank Building, Waterloo
Bowie, A. R., 211 High Avenue, E., Oskaloosa

KANSAS

Delegates

Carothers, Frank C., Carter Building, Garnett
Lucas, J. Wesley, 1011 First National Bank Building, Wichita
Richmond, Fred A., 861 Brotherhood Building, Kansas City
Stalker, Clinton L., 727 Mills Building, Topeka

Alternates

Teall, Gordon L., Hiawatha
Edwards, Harold J., A. C. Office Building, Arkansas City
Bunker, Herbert L., Junction City
Robison, Homer B., Wiley Building, Hutchinson

KENTUCKY

Delegates

Kelly, J. J., Franklin
Draper, C. D., 529 East Center Street, Madisonville
Myers, Raymond E., 129 East Broadway, Louisville
Lyon, O. M., Morehead
Coxwell, A. B., 1976 Douglass Boulevard, Louisville

Alternates

Bach, M. T., 300 East Third Street, Newport
Prewitt, George H., 503 Bank of Commerce Building, Lexington
Willis, E. A., 115 East Fourth Street, Owensboro
Tagliarino, V. A., 2406 South Preston Street, Louisville

LOUISIANA

Delegates

Smith, J. Melville, III, 1224 Maison Blanche Building, New Orleans
Earnest, J. C., Bernhardt Building, Monroe
Smith, Alfred E., 1936 South Carrollton Avenue, New Orleans
McHardy, Colin A., 308-311 Guaranty Income Life Building, 929 Government Street, Baton Rouge

Alternates

Marquer, Victor B., 2213 South Carrollton Avenue, New Orleans
Jarrell, M. F., Box 1986, Alexandria
Wolfe, F. J., Sr., Maison Blanche Building, New Orleans
Bernhard, Julian S., 2515 Line Avenue, Shreveport

MARYLAND

Delegates

Bell, Arthur I., Medical Arts Building, Baltimore
Nuttall, Ernest B., University of Maryland Dental School, Baltimore
Pessagno, E. L., Jr., Medical Arts Building, Baltimore
Stone, E. D., Jr., Medical Arts Building, Baltimore
Chanaud, Norman P., Centerville

Alternates

Preis, Kyrle W., 700 Cathedral Street, Baltimore
Clendenin, George B., 4406 East West Highway, Bethesda
Wheeler, Arthur S., Medical Arts Building, Baltimore
Cramer, Morris, 2352 Eutaw Place, Baltimore
Leonard, Richard C., 2411 North Charles Street, Baltimore

MASSACHUSETTS

Delegates

Rogell, Bernard C., 6 Pleasant Street, Malden
Grossman, Maurice F., 301 Essex Street, Lawrence
Fink, George E., 416 Marlborough Street, Boston
Tingley, Harold E., 12 Bay State Road, Boston
Doherty, Joseph A., 419 Boylston Street, Boston
Bommer, Arno M., 349 Broadway, Revere
Hooper, N. Abbott, 48 Pleasant Street, Gloucester
Dionne, Eugene J., 273 North Main Street, Fall River
Sawtell, Merton E., 196 Main Street, Brockton
Marx, William C., 316 High Street, Holyoke
Levesque, Raymond E., 66 Parker Street, Gardner
Seaman, Walter R., 69 Federal Street, Pittsfield
Maycock, James H., 332 Main Street, Worcester
Baxter, Robert L., 35 High School Road, Hyannis

Alternates

Trevor, Frederick A., 775 Main Street, Melrose
Riley, William A., 180 Essex Street, Lawrence
Durling, Edward J., 29 Commonwealth Avenue, Boston
Carpenter, Victor H., 99 Bay State Road, Boston
Donahue, William F., 520 Beacon Street, Boston
Sagall, Barnard, 114 Shirley Avenue, Revere
Pickering, Clinton W., 23 Central Avenue, Lynn
Smith, George R., 289 Pine Street, Fall River
Quinn, Thomas W., 1245 Hancock Street, Quincy
Moran, John F., 44 Vernon Street, Springfield
Smith, Isadore W., 27 Main Street, Leominster
Gregory, Sirak K., 16 South Street, Pittsfield

Brown, George Cowles, 332 Main Street, Worcester
Bohaker, Karl A., 142 Main Street, Falmouth

MICHIGAN

Delegates

Diedrich, A. V., 14015 Gratiot Avenue, Detroit
Teal, D. M., 210 South Main, Yale
Brooks, G. R., First National Bank Building, Rochester
Walmoth, R. W., 901 Mutual Building, Detroit
Donnelly, A. J., 406 Muskegon Building, Muskegon
Short, J. R., 2901 South Westnedge Avenue, Kalamazoo
Hart, R. A., 427 North Michigan Avenue, Saginaw
Klinesteker, R. E., 216 Metz Building, Grand Rapids
Harling, C. W., 15510 Mack Avenue, Detroit
Jesson, S. P., 1083 East Maple, Birmingham
Ostrander, F. D., University of Michigan, School of Dentistry, Ann Arbor
Lowther, A. H., 811 Mutual Building, Detroit
Wertheimer, Fred, Michigan Department of Health, Lansing
Sanregret, R. J., Negaunee
Cheney, E. A., 320 West Ottawa Street, Lansing

Alternates

Jamieson, Charles H., 563 David Whitney Building, Detroit
Shehan, H. L., 601 Jackson City Bank Building, Jackson
Sawicki, A. C., 7012 Michigan Avenue, Detroit
Gotschall, Neil D., 7627 East Jefferson, Detroit
Jeserich, Paul H., 5145 Pontiac Road, Ann Arbor
Rochon, Rene, 630 East Jefferson, Detroit
Champagne, J. L., 3714 West McNichols Road, Detroit
Matson, Charles H., 409 Dryden Building, Flint
Blight, H. E., 568 Fisher Building, Detroit
Burkman, N. W., 525 West Merrill, Birmingham
Blackerby, P. E., 159 College, Battle Creek
Schied, E. L., 610 South Brown Street, Jackson
Kelly, C. A., Sandusky
Wright, J. K., 201 State Bank Building, Traverse City
Leitch, M. A., 14807 West McNichols, Detroit

MINNESOTA

Delegates

MacKay, D. R., 925 Lowry Medical Arts Building, St. Paul
Walls, Milton, 1470 Lowry Medical Arts Building, St. Paul
Hyde, Walter, 434 LaSalle Building, Minneapolis
Sitz, Chester, 120 Mill Street, Austin
Oltmans, S. J., 418 LaSalle Building, Minneapolis
Wilson, D. W., Belle Plaine
Peterson, Clifford, 401 South Front Street, Mankato
Pike, Joseph, 811 Medical Arts Building, Minneapolis
MacQueen, W. W., 805 Physicians and Surgeons Building, Minneapolis
Kleinhauizen, C. M., Foundation Building, Willmar
East, C. D., 5701 Grand Avenue, Duluth

Alternates

Cassel, C. V. E., 242 Lowry Medical Arts Building, St. Paul
Dickson, W. A., 1535 Medical Arts Building, Minneapolis
Clark, D. R., 747 Medical Arts Building, Minneapolis
Colby, Henry E., 1850 Medical Arts Building, Minneapolis
Hooper, R. D., 242 South Cleveland Avenue, St. Paul
Ernst, Max, 1250 Lowry Medical Arts Building, St. Paul
Crawford, William, University of Minnesota, Minneapolis
James, W. J., Bemidji
Bang, C. B., Fertile
Boman, G. E., 2002 West Superior Street, Duluth
Johnson, H. E., Albert Lea

MISSISSIPPI

Delegates

Leggett, T. Ford, Laurel
Boswell, John Clark, 508 Plaza Building, Jackson
Williams, Claude S., Hattiesburg

Alternates

Abbott, Rush P., West Point
McCarty, G. A., 401 Plaza Building, Jackson
Blackburn, Estes M., 949 North State Street, Jackson

MISSOURI

Delegates

Brock, D. W., 6026 Enright Avenue, St. Louis
Rode, Ralph, 518 Frisco Building, St. Louis
Haverstick, E. E., 346 North Boyle Avenue, St. Louis
Marshall, Kenneth, 35 North Central, Clayton
Rosen, Ralph, 1006 Paul Brown Building, St. Louis
Ross, Gordon L., 926 Professional Building, Kansas City
Hamilton, Bates, 1107 Bryant Building, Kansas City
White, Wayne, 6333 Brookside Plaza, Kansas City
Suggett, E. D., 201 Merchants Bank Building, Jefferson City
Holt, Charles B., 502 Medical Arts Building, Springfield

Alternates

Kirby, J. V., 33 North Meramec, Clayton
Rose, J. M., 809 University Club Building, St. Louis
Brooks, E. C., 4500 Olive Street, St. Louis
Main, L. R., 3556 Caroline Street, St. Louis
Hennessy, Robert, 8013 Maryland Avenue, St. Louis
Porter, C. G., 255 Plaza Bank Building, Kansas City
Williams, Jarvis, 75th and Troost, Kansas City
Frost, Ralph, 512 Bryant Building, Kansas City
Bredall, G. H., 112 West Ste. Maries, Perryville
Craigmiles, L. M., Fidelity Building, Hannibal

MONTANA

Delegates

Dohrman, S. T., Ford Building, Great Falls
Vedova, E. G., Roundup

Alternates

Beveridge, Charles, Hart Albin Building, Billings
Curry, R. D., Dillon

NEBRASKA

Delegates

Myers, L. E., 1229 Medical Arts Building, Omaha
Sittler, W. G., Gordon
Lamphere, W. W., 2720 O Street, Lincoln
Breeze, F. A., 727 City National Bank Building, Omaha
Baker, C. E., David City

Alternates

Herbst, A. P., Norfolk
Murray, M. J., Sidney
Krim, J. G., Beatrice
Honsa, S. J., 624 National Bank Building, Omaha
Beck, V. L., Hastings

NEVADA

Delegate

Cafferata, Harold E., 190 Mill Street, Reno

Alternate

Nelson, Louis M., 407 Medico Dental Building, Reno

NEW HAMPSHIRE

Delegates

Williams, Floyd E., 814 Elm Street, Manchester
Marion, George O., 211 Main Street, Nashua

Alternates

Stuart, William F., 19 Pleasant Street, Claremont
Rund, Karl F., Union Block, Claremont

NEW JERSEY

Delegates

Lentz, Maxwell J., 655 Main Avenue, Passaic
Saporito, Louis A., 15 Washington Street, Newark
Quirk, Pierce A., 921 Bergen Avenue, Jersey City
Newman, Eugene W., 16 Wallace Street, Red Bank
Galdieri, D. J., Park Square Building, Morristown
White, Edward R., 921 Bergen Avenue, Jersey City
Gindin, Jac P., 280 Hobart Street, Perth Amboy
Owens, John S., 407 Cooper Street, Camden
Champlin, T. R., 525 Park Avenue, Plainfield
Nelson, Alfred W., 196 The Plaza, West Englewood
Lyons, Stephen M., 382 Springfield Avenue, Summit
Giblin, William A., 85 Park Street, Montclair
Burns, James R., 46 South Olden Avenue, Trenton

Westcott, Eugene R., The Mayfair Apartments, Atlantic City
Cranmer, Richard S., 3314 Federal Street, Camden

Alternates

Frost, Michael, 602 Van Houten Avenue, Clifton
Fitzsimmons, Leslie J., 144 South Harrison Street, East Orange
Zlonczewski, Edward, 562 Jersey Avenue, Jersey City
Campi, John G., Medical Arts Building, Asbury Park
Delpho, Donald A., 25 Maple Avenue, Morristown
Rosenwasser, Ben, 4809 Bergenline Avenue, Union City
Levy, Milton, 18 Hamilton Street, Bound Brook
White, George J., 12 Broad Street, Riverton
Powers, Thomas F., 819 Park Avenue, Plainfield
Heydon, Luther, 78 Central Avenue, Hackensack
Burroughs, C. E., 382 Springfield Avenue, Summit
Paul, Frank, 148 Central Avenue, Montclair
Wilson, Walter A., 28 Duncan Avenue, Jersey City
Brown, Benjamin A., 2701 Pacific Avenue, Atlantic City
Barron, John W., 255 Kings Highway, East, Haddonfield

NEW MEXICO

Delegates

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Voda, Isador L., 614½ Douglas Avenue, Las Vegas

Alternates

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Eller, Charles A., First National Bank Building, Albuquerque

NEW YORK

Delegates

Abeloff, A. J., 8638 Bay Parkway, Brooklyn
Back, Philip, 237 Willis Avenue, New York
Battista, Peter L., 232 Delaware Avenue, Buffalo
Bedell, Walter R., 49 Market Street, Poughkeepsie
Bell, Willard S., 118-02 Rockaway Boulevard, South Ozone Park
Besdine, Matthew, 1182 Dean Street, Brooklyn
Bisnoff, Harry L., 89-21 153rd Street, Jamaica
Blutau, Theodore C., 89 East Avenue, Rochester
Burchell, Raymond F., 46 Main Street, Akron
Burns, Wm. McGill, 80 Hanson Place, Brooklyn
Burr, LeRoy E., 27 Ludlow Street, Yonkers
Clug, Bernard, 17 Park Avenue, New York
Feinman, Jacob, 25 Forest Avenue, Silver Lake, Staten Island
Fennelly, William A., 33 West 42nd Street, New York
Flynn, John T., Harwood Court, Scarsdale
Folley, J. F., 3½ Oxford Road, New Hartford
Gale, E. Harold, 142 Washington Avenue, Albany
Gordon, Leo, 2 West Park Avenue, Long Beach
Greenwood, George D., 1060 Meigs Street, Rochester
Heckler, Maxwell A., 366 Madison Avenue, New York
Heinze, Robert L., One Hanson Place, Brooklyn
Herman, George H., 725 State Street, Schenectady
Hoffman, S. G., 91 Fulton Avenue, Hempstead
Hutchins, William S., 1710 Gilderland Avenue, Schenectady
Hyde, William H., 857 Eastern Parkway, Brooklyn
Isaacson, Samuel A., 501 Madison Avenue, New York
Kelsey, Earl J., Theresa
Kettenring, Alfred W., 20 South Broadway, Yonkers
Lawrence, Harley, 20 East Market Street, Corning
Lazarus, Charles H., 103 Main Street, Northport
Lifschutz, Alex N., 616 East 19th Street, Brooklyn
Lodico, Louis J., 452 West Church Street, Elmira
McCormack, O. J., Keith Building, Syracuse
McHugh, Francis X., 576 Fifth Avenue, New York
Miller, Donald H., 109 Walnut Street, Elmira
Morse, Arthur, 111-19 103rd Avenue, Richmond Hill
Morse, Roland E., 14 West 49th Street, New York
Muir, William M., Gowanda
Obst, Joseph J., 8 Seventh Avenue, Brooklyn
Pammenter, Elmer J., 480 Van Voorhis Avenue, Rochester
Pankow, Charles A., 902 Main Street, Buffalo

Phillips, Percy T., 18 East 48th Street, New York
Riesner, Sidney E., 136 East 36th Street, New York
Roohan, Leo W., 360 Broadway, Saratoga Springs
Schick, Edgar C., 121 North Pearl Street, Albany
Schuyler, Clyde H., 400 Madison Avenue, New York
Squires, Franklin A., 170 Maple Avenue, White Plains
Taub, Herbert L., 88-56 163rd Street, Jamaica
Taylor, Walter E., 9 St. Bernard Street, Saranac Lake
Teich, Isidore, 535 Fifth Avenue, New York
Wilkie, Charles A., One Hanson Place, Brooklyn
Zillmann, Paul W., 29 Walden Avenue, Buffalo

Alternates

Abelson, Louis I., 200 West 59th Street, New York
Amsterdam, Charles, 161-01 Jamaica Avenue, Jamaica
Asgis, Alfred J., 7 East 42nd Street, New York
Bissell, Tracy M., 3377 Bailey Avenue, Buffalo
Bowman, Harold, 89 East Avenue, Rochester
Bowman, Ralph J., 121 East 60th Street, New York
Brewer, William N., United Office Building, Niagara Falls
Brink, Richard L., Franklinville
Corn, Arthur N., 88-56 163rd Street, Jamaica
Corby, Arthur E., 44 Wall Street, New York
Cullen, Thomas R., 189 West 1st Street, Oswego
Donally, K. N., 18 East 48th Street, New York
Dunn, Lawrence J., 80 Hanson Place, Brooklyn
Eaton, Leonard J., 115 Park Avenue, Mount Vernon
Faust, Carlton L., 425 Robinson Street, Binghamton
Freilich, Norman L., 187 Broad Street, Stapleton, Staten Island
Friedman, Joel, 499 Lincoln Place, Brooklyn
Gleason, James P., 458 Chili Avenue, Rochester
Goldstein, Max, 81 Centre Avenue, New Rochelle
Hewett, Arthur A., 348 Woolworth Building, Watertown
Horton, Harold S., 1 De Kalb Avenue, Brooklyn
Howe, Gerald D., 258 Genesee Street, Utica
Hunn, David E., 46 Second Street, Troy
Kobrin, Nathan, 486 78th Street, Brooklyn
LoGrasso, Anthony, 200-01 32nd Avenue, Bayside
McKinnon, Malcolm J., 1056 Sibley Tower Building, Rochester
Meinhardt, Harry R., Box 755, Kingston
Michaelson, M. E., 240 Central Park South, New York
O'Brien, Donald, 33-50 158th Street, Flushing
Pautler, Arthur J., 207 Bewley Building, Lockport
Reisman, Harry, 40 Monroe Street, New York
Santoro, E. D., 42 South Main Street, Gloversville
Scheiner, Benjamin E., 2665 Grand Concourse, Bronx
Schick, Walter H., 1590 Union Street, Schenectady
Sherman, Leo, 1 De Kalb Avenue, Brooklyn
Standard, Stanley G., 225 West 34th Street, New York
Stern, Maurice N., 114-06 Queens Boulevard, Forest Hills
Stevens, Walter W., 54 Noxon Street, Poughkeepsie
Stiller, Aloys, 790 Tonawanda Street, Buffalo
Strusser, Harry, 919 Flatiron Building, New York
Webb, William R., 3441 79th Street, Jackson Heights
Wells, C. Raymond, 1 De Kalb Avenue, Brooklyn
Wenig, H. L., 253-02 Northern Boulevard, Little Neck
Whitmarsh, DeForest, 49 Front Street, Binghamton

NORTH CAROLINA

Delegates

Sheffield, Neal, 304 Dixie Building, Greensboro
Walker, Bernard N., 607 Liberty Life Building, Charlotte
Jones, Paul, South Main Street, Farmville
Jackson, Wilburt J., Rich Building, Clinton
Poindexter, C. C., 310 Jefferson Building, Greensboro

Alternates

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Hunt, R. Fred, P.O. Box 926, Rocky Mount
Current, A. C., 618 Commercial National Bank Building, Gastonia
Towler, S. B., 804 Professional Building, Raleigh
Kirk, Frank W., 200 Wallace Building, Salisbury

NORTH DAKOTA

Delegates

Smeby, A. L., Northwood

Corbett, V. A., Minot

Alternates

Sand, R. A., 807 Broadway, Fargo
Krause, R. F., 417 Broadway, Bismarck

OHIO

Delegates

Lowry, E. D., 79 East State Street, Columbus
Heibert, A. C., 1034 Second National Building, Akron
Bach, E. N., 305 Professional Building, Toledo
Connor, P. L., 401 Stambaugh Building, Youngstown
Hoppe, H. J., 4187 Pearl Road, Cleveland
Stark, C. J., 1238 B. F. Keith Building, Cleveland
Robinson, H. B. G., College of Dentistry, Ohio State University, Columbus
Smith, H. B., 336 East State Street, Columbus
Schmid, S. A., 1104 Federal Reserve Bank Building, Cincinnati
Creig, R. E., 10465 Carnegie Avenue, Cleveland
Wylie, W. L., 2165 Adelbert Road, Cleveland
Lilly, T. E., 710 Fidelity Building, Dayton
Pryor, W. J., 1020 Rose Building, Cleveland
Postle, W. D., 1714 North High Street, Columbus
Sterling, W. J., 6412 Lorain Avenue, Cleveland
Aufderheide, P. J., 946 Rose Building, Cleveland
Jarvis, H. C., 716 Mercantile Library, Cincinnati
Steffel, V. L., 19 West 5th Avenue, Columbus

Alternates

McDermott, T. J., 821 Rose Building, Cleveland
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THE Journal OF THE AMERICAN DENTAL ASSOCIATION

Editorials

Cleveland welcomes dentists to the ninety-fourth annual session of the Association in September

Thirteen years have elapsed since the Association last met in Cleveland, a surprisingly long time considering the city's location, accessibility, convention facilities and the hospitality of its local dental society. Judging, however, by reports of the Committee on Local Arrangements and the Council on Scientific Sessions, the program provided for the ninety-fourth annual session of the Association scheduled for September 28 to October 1 will more than make up for the profession's seeming oversight of Cleveland's many qualifications.

Departing somewhat from established procedure the Council on Scientific Sessions this year highlights the Cleveland scientific program with three important half-day symposiums, each covering one specific phase of dentistry and all of vital interest to the general practitioner. The subjects of the symposiums are: "Denture Service for Your Patient," "Newer Anesthetics of Interest to the General Practitioner," and "Is There a Therapeutic Dentifrice?" Advance information regarding these feature events as well as information relative to subjects discussed on programs of the eleven scientific sections plus information on the scientific exhibits, technical exhibits, table clinics, motion pictures and other features are to be found in the preliminary program published in this issue of THE JOURNAL beginning on page 50.

The younger members of the Association—those twenty-five thousand or so who have entered the profession since the last meeting in Cleveland in 1940—particularly are invited to attend the ninety-fourth annual session this fall. The older members, of course, also are urged to revisit the beautiful forest city to refresh memories, renew acquaintances and, more important, refurbish their operative procedures.

The annual scientific session of the Association is a composite postgraduate course of the highest order. The privilege of attending ranks among the first of the many valuable benefits of membership. The practical member does not fail to take advantage of the educational opportunities offered. He knows that one new idea gleaned, one new timesaving device gained or one improved technic learned that will enable him to provide more and better service to his patients will far outweigh the effort and time it takes to attend an annual meeting.

If you have not already done so, mark off September 28 to October 1 on your calendar and make your hotel reservations now. Turn to page A-55 of this issue, fill out the hotel reservation form and mail it at once to the American Dental Association Housing Bureau in Cleveland.

Therapeutic dentifrices to be analyzed at Cleveland symposium

The announcement by the Council on Scientific Session of a five-man symposium on therapeutic dentifrices to be held in Cleveland at the ninety-fourth annual session of the Association, September 28 to October 1, promises to produce a packed house. The growing concern with which members of the profession view the increasingly exaggerated promises for this type of product gives assurance that an SRO sign will be hung early at all entrances to the Music Hall of the Cleveland Public Auditorium.

Plans provide for a thorough dissection of the therapeutic dentifrice problem including an exhaustive discussion of the action of antienzymatic agents, chlorophyll, ammonia and urea, the antibiotic agents and their use in the general practice of dentistry. The formal discussants will consist of five of America's leading dental researchers: L. S. Fosdick, J. W. Hein, R. G. Kesel, A. H. Knieser and H. A. Zander. At the close of the period the conclusions of the participants will be presented by the moderator, Thomas J. Hill.

To the 77,000 members of an Association whose objectives are to encourage the improvement of the health of the public and to promote the art and science of dentistry, the hucksters' puffs of dental creams and dental powders are deplorable, exasperating and embarrassing. Many of these puffs and superclaims are on the same low level as those made for discredited cancer cures and arthritis remedies. Even though the use of overpuffed dentifrices, unlike the use of overpuffed cancer remedies, rarely ends disastrously, it is disconcerting to dentists to witness the huckster take advantage for financial gains only of an education program designed by the profession to improve public health.

The Council on Scientific Session is to be congratulated on arranging this half-day meeting at the coming session in September. It is not to be expected that the symposium will unhorse the hucksters, but it is hoped that the scientific evidence presented at that time by the battery of unbiased researchers will bridle the exuberance of advertisers so effectively that they will be forced to ride less roughshod over the public in the future.

Blood—a priceless national resource

One of the greatest contributions made by medical science has been the perfection of technics which permit the blood of one person to be used for the benefit of another. Blood banks have been established in every community, and millions of our citizens have become blood donors. One of the greatest uses for human blood is in the processing of gamma globulin employed in the fight against poliomyelitis. Tests last summer demonstrated that injections of gamma globulin proved effective as a means of minimizing the onset of polio or of reducing the severity of paralysis resulting from the disease. Less dramatic but equally important is the use of immune serum globulin in the prevention and treatment of measles and infectious hepatitis. Some 2,000,000 children are expected to be exposed to infantile paralysis in epidemic areas this summer. How many of them will be protected from the dreadfully crippling effects of the disease will depend in part on you.

In addition to blood collected for processing into gamma globulin and for other peacetime purposes, millions of pints are needed for the Armed Forces. Because so many dentists served in World War II and others in Korea, it is not necessary to point out here the urgent need for blood at the front or in military hospitals at home. During World War I, it is reported, approximately ten of every one hundred wounded men who reached advance surgical hospitals eventually died of their injuries. In World War II the rate was cut in half to approximately five out of one hundred. In Korea the mortality rate for wounded men reaching forward aid stations has been further reduced to two and one half out of one hundred. This encouraging improvement in the saving of lives has been credited to the prompt and liberal use of whole blood and plasma on the battle front as well as to new advances made in combat zone treatment of battle wounds.

During the past year the American Red Cross reports that it collected and turned over to the Department of Defense some two and one half million pints of blood for shipment to Korea and for ready reserves of plasma. There is no end in sight for the Korean conflict and no lessening of the blood plasma needs for our youth who fight there.

The contribution of the scientist in perfecting the technic of blood transfusion is matched by the contribution of the Red Cross in perfecting machinery on a national scale for collecting, processing and delivering the lifesaving fluid. But the contributions of the scientist and the Red Cross are of little avail unless they are matched wholeheartedly by American donors—including American dentists. Few indeed are the dentists who do not have one or more patients crippled by poliomyelitis. Few indeed are the dentists who have not felt the loss, during World War II or the present Korean debacle, of some boy in his immediate family or in his practice who might have been saved by a blood transfusion.

Blood is a priceless national resource. More than 5,000,000 pints must be donated this year to meet the nation's needs. Every member of the dental profession between the ages of 18 and 60 who is in good health is urged to contribute.

Washington News Letter

Sometime in July, Congress is scheduled to complete action on the Veterans Administration appropriations bill and to decide whether the notorious "service-connected tooth" is to be disqualified.

Dental care of veterans has been designated as a "trial balloon" and the final outcome of the current controversy over federal responsibility will play a large role in determining whether health benefits to former servicemen are to be expanded still further, held at present levels or contracted. The recent recommendation of the House Appropriations Committee that government-paid outpatient dental care be limited to the first year following separation from military service is a significant step, marking a trend toward restriction of benefits for service-connected disabilities. (Veterans Administration does not provide outpatient medical or dental care for nonservice-connected cases.)

One thing certain is that VA's so-called home town dental care program is to be cut down in volume. In contrast with earlier postwar years when sums approximating $35,000,000 were earmarked for reimbursement to private practitioners performing outpatient dental services, it is doubtful whether the appropriation for the 1953-54 fiscal year will exceed $23,000,000.

At the present time, more than 300,000 veterans have their names on the dental waiting list. Contraction of the home town care program will mean that a greater percentage of this outpatient work will have to be done by VA staff dentists at regional offices, if the backlog is to be prevented from assuming astronomical proportions. However, with the new year's appropriations channeled mainly toward inpatient hospital care, VA's dental department fears that funds for personnel, auxiliary help and supplies will be insufficient to meet the anticipated demand.

Rep. John Phillips (R., Calif.), chairman of the House subcommittee that conducted hearings and drew up the VA budget, believes that the full-time dentists at regional offices do not have enough work to do. In the subcommitteee's report, which was adopted by the full appropriations committee, it was stated:

> It is the opinion of the committee that much more dental service can be provided by the dental staff of VA, thus reducing the amount required for outpatient (fee-basis) service. The patient treatment rate per dentist is low and the number of dentists doing paper work is excessive. This situation becomes particularly serious when it is realized that the Congress was compelled recently to pass a law drafting doctors and dentists for military service.

The Congressman's conclusion that the VA's own staff dentists are seeing too few patients arose from his discovery that 122 of the 422 assigned to regional offices are engaged in adjudication of claims, review of services performed by private dentists and other types of paper work. This subject was taken up at some length in closed hearings, over which Representative Phillips presided, an extraordinary feature of which was that neither Dr. John Fauber, assistant chief medical director for dental services, nor any members of his staff were present to answer questions.

During the hearing Rep. Phillips expressed the opinion that laymen could do as good a job as dentists in examining dental charts, going over fee charges and fulfilling other duties to which 122 dentists are assigned. Whether he was right or wrong about this, the fact is that the circumstances were not explained to him and that no VA dentist

received an opportunity to clear up the unanswered questions raised by Representative Phillips.

With regard to the work load carried by full-time VA dentists, which the California Representative says is too light, figures for the first nine months of the 1953 fiscal year (July 1952-March 1953) reveal that the dollar value of services performed by them compared favorably with the average output of private practitioners.

Among the few nongovernment witnesses whose testimony was heard by the Phillips subcommittee was Francis J. Garvey, representing the American Dental Association. He appeared in closed session on May 18 but the transcript of his statement was not released on Capitol Hill until the second week in June. One of the points Mr. Garvey stressed was the fallacy that the federal government should provide outpatient care indefinitely for the "service connected tooth." His statement reads in part:

> It has been decided, based upon a solicitor's opinion, that a carious tooth becomes service connected as an entity. This means that the Veterans Administration will provide care for that tooth throughout the lifetime of the veteran, will replace it if it is lost, and will replace other nonservice-connected teeth if, in the judgment of the dentist, this is necessary in order to replace the service-connected tooth.
>
> The Association disagrees with this concept. Sound professional opinion holds that a carious lesion is, in most instances, *sui generis*, and that treatment of that lesion by the most advanced methods known to the dental profession today is all that can be done to correct it. In other words, if the lesion is corrected by a properly applied filling or other restoration it is, in most instances, cured.

The clause which the Phillips subcommittee inserted in the appropriations bill for the purpose of limiting outpatient dental care reads as follows:

> No part of this appropriation shall be available for outpatient dental care and treatment, or related dental appliances, when the dental condition or disability being treated is not compensable, unless such condition or disability is shown to have been in existence at time of discharge and application for treatment is made within one year after separation from service, or one year after the enactment of this Act, whichever is later: Provided, further, that when any such noncompensable dental condition or disability has once been corrected, additional care and treatment therefor may not be provided.

COUNCIL ON LEGISLATION SUMMARIZES NEW DRAFT BILL

A sliding scale of required service based on previous duty has been introduced and the $100 monthly equalization pay has been continued in the new two-year extension of the dentists-physicians draft law which became effective July 1. The following summary of the bill, together with interpretations of its provisions, is issued by the Council on Legislation, through E. Harold Gale, chairman:

Who Must Register • All persons who hold a dental degree, whether in active practice or not, who have not reached their 50th birthday must register unless they are members of a regular or reserve component of the Armed Forces. Registrants are liable for induction until they have reached their 51st birthday.

New graduates must register, under the terms of a presidential proclamation which will remain in effect, within five days after receipt of their degrees.

Priorities • The four priorities remain in the law, but some changes may be made by the new provisions. Thus, those in Priority I and Priority II can count service prior to entering ASTP or V-12 for purposes of changing to Priority II or Priority IV. Any person in Priority II with 17 or more months of service, excluding ASTP or V-12, is automatically transferred to Priority IV.

In the Priority III group, service with an Armed Force of a country allied with the United States prior to September 2, 1945; work performed as a conscientious objector under orders, and service performed as a dentist employed by the Panama Canal Health Department between September 16, 1940, and September 2, 1945, will be counted to shift the individual concerned to Priority IV.

What Constitutes Active Duty • All periods of active duty of one day or more are counted except:

1. periods spent in an ASTP, V-12 or similar program;
2. periods spent in residency or intern or other postgraduate training or in a senior student program prior to receipt of a professional degree;
3. periods of duty performed for the sole purpose of undergoing a physical examination;
4. training duty after the date of enactment of the amendment;
5. time spent in the Public Health Service which ends after April 30, 1953, unless termination of service is approved by the Public Health Service.

Exclusion of Those with 21 Months' Service • No person who has served 21 months on active duty since September 16, 1940, is liable for induction or reinduction without further action by Congress.

Equalization Pay • The $100 monthly equalization pay is continued until July 1, 1955, and all persons who are eligible for such pay who enter on active duty prior to that date will continue to receive it until such time as they are separated from the service.

Prohibition of $100 to Inductees • The bill retains the prohibition against paying the $100 per month to any person who is inducted and subsequently applies for and receives a commission in the medical or dental corps.

Commissioning of Aliens • Aliens who become liable for induction are made eligible for commissions in all branches of the Armed Forces.

National Advisory Committee • The national, state and local advisory committees are continued and, in addition to their former functions, they are authorized to make recommendations for the deferment of persons for residency training, of faculty members and of those engaged in essential laboratory and clinical research.

Rank: Appointment and Promotion • Any registrant is entitled to be appointed, or if he has served and been discharged, to be reappointed to a rank commensurate with his professional education and ability, and reservists recalled to active duty are entitled to be promoted to appropriate rank.

Discharge and Resignation • Any special registrant, who is not also a general registrant and who has no other liability to the government for required military service, and any reservist who has no other liability to the government for military service, shall be entitled to a discharge from his commission, either upon separation from service or within six months from the effective date of the amended law, if he has served 12 months on active duty after September 9, 1950. Persons who are discharged or resign are not liable for recall under the special draft law.

Termination Date of Law • The law, under the amendment, will terminate July 1, 1955. Until that date the President is authorized to call registrants for induction or to order reservists to duty without their consent in the order of priorities set out. The priorities are made applicable to reservists as well as registrants by the new law. Formerly, the priorities were applied to reservists by executive order.

Periods of Active Duty • In lieu of the provision for 24 months' service, the new bill contains a series of required periods which vary according to length of prior service as follows:

1. a required 24 months if there has been less than 9 months of previous active service;
2. a required 21 months if previous active service was 9 but less than 12 months;
3. a required 18 months if previous active service was 12 months but less than 15 months;
4. a required 15 months if prior active service was 15 months or more.

Early Release for Those Now on Duty • In case an individual is now on active duty, he may ask that his case be reexamined in terms of the periods of required active duty set out in the sections on "priorities" and "periods of active duty." If such analysis indicates that he would be properly classified in Priority IV under the new rules, or that he is entitled to release on the basis of his prior service, he may apply for immediate discharge, and he must be separated from the service within 90 days after the enactment of the amendment. He may also request discharge from his commission if he meets the tests set out in the section "discharge and resignation."

Five-Year Commission Holders • Those persons who were commissioned in the Army or Air Force prior to July 10, 1952, were given five-year commissions. If such commissions have not been converted to the new indefinite type, and expire while an individual is on active duty, he can be required to continue to serve until he is eligible for release under the conditions set out in the section "periods of active duty."

Association Affairs

COUNCIL ON JOURNALISM TO EVALUATE PUBLICATIONS

A survey of constituent society publications, designed to evaluate editorial matter and production technics, will be undertaken during the next year by the Council on Journalism, according to an announcement by William L. Barnum, Council chairman.

The Council, which met June 4 in the Central Office, will continue to study the possibility of establishing a cooperative national advertising bureau.

On June 5-6, the Council and the American Association of Dental Editors sponsored a Conference on Dental Journalism, which was attended by 32 representatives of 25 publications.

Among those present were:

Miss Joan Ackerman of Chicago; Mrs. Helen C. Allen of Detroit; William L. Barnum of Portland, Ore.; Paul E. Bomberger of Lancaster, Pa.; Paul F. Brown, Jr., of Atlanta, Ga.; Mrs. Edna F. Caudill of Louisville, Ky.; Ray Cobaugh of Harrisburg, Pa.; J. M. Donovan of Neenah, Wis.; A. R. Drescher of Oklahoma City; Celestine S. Faber of Bellerose, N. Y.; Miss Belle C. Fiedler of Appleton, Wis.; J. C. A. Harding of San Diego; Charles F. Harper of Jersey City; Fred A. Henny of Detroit.

Also, James F. Hughey of Tuscaloosa, Ala.; Ernest A. Hurley of Portland, Ore.; Howard V. Jones of Hollywood, Calif.; Joe W. Jones, Jr. of Dawson Springs, Ky.; Austin Kutscher of New York; Lester M. Lucas of Washington, D. C.; L. T. Maloney of Boston; Walter C. McBride of Detroit; Karl W. Richardson of Chicago; Martin A. Rothman of New Haven, Conn.; J. A. Salzmann of New York; Mrs. Betty Satterfield of Jefferson City, Mo.; William P. Schoen of Chicago; Alfred Seyler of Detroit; H. Leon Snow of Lansing, Mich.; Loren B. Taber of San Francisco; Charles A. Wilkie of Brooklyn; Morris J. Wilson of Greenville, Ky., and Margarita Muruzabel of Buenos Aires, Argentina.

Editors, editorial assistants and executive secretaries who participated in the second Conference on Dental Journalism are shown as they met June 5-6 in the Central Office. The conference was sponsored jointly by the Council on Journalism of the Association and the American Association of Dental Editors.

NOMENCLATURE CONFERENCE ASSIGNS CONTINUING STUDIES

Committees formed at the nomenclature conference which was held June 10-11 at the Central Office have agreed unanimously to continue the work of defining dental terms and referring them to specialty organizations.

Specific assignments were given the committees at the conference, it was announced by Donald A. Washburn, director of the Library and Indexing Service, sponsor of the conference.

The committees and their members are:

Committee on oral anatomy, physiology and development:

Isaac Schour of Chicago, chairman
Touro M. Graber of Chicago
Roger E. Huntington of Evanston, Ill.
Albert A. Dahlberg of Chicago
Harry Sicher of Chicago
Miss Eva Bowden of Houston, Texas

Committee on oral pathology and surgery:

Sholom Pearlman of Chicago, chairman
Donovan W. Brown of Chicago
Dan Y. Burrill of Louisville
J. M. Wisan of Washington, D. C.
Victor H. Dietz of St. Louis
Miss M. E. Parsons of Cambridge, Mass.
E. S. Khalifah of St. Louis

Committee on restorative dentistry and dental materials:

Stanley D. Tylman of Chicago, chairman
La Mar W. Harris of Chicago
Lewis W. Thom of Minneapolis
Miss Jean Husted of Philadelphia
Robert E. Blackwell of Chicago

The conference was under the general direction of George B. Denton of Chicago, research consultant of the Association.

APPOINTMENT BOOK FOR 1954 NOW AVAILABLE

The 1954 appointment book, published yearly by the Association for dentists in private practice, is now available and

copies may be ordered from the Order Department of the Central Office at $2.00 each.

Each double-page spread contains the columns for one week, Monday through Friday, and each day is divided into half-hour periods. Holidays are noted and month-by-month pages are included for recall systems.

COUNCIL LISTS REQUIREMENTS OF STATE DENTAL BOARDS

The annual compilation, "Requirements and Registration Data of State Dental Examining Boards," produced by the Council on Dental Education, has been issued for 1953 in pamphlet form.

"We have added new information and have determined that the six-page booklet will be more convenient than the chart which was formerly published," stated Shailer Peterson, secretary of the Council on Dental Education.

Requirements for dental licensure examination and registration data for examination are presented for each state

and territory of the United States. The same data is presented for dental hygiene licensure in a separate section.

The booklets have been sent to all dental schools and state dental examining boards. Single copies will be available on request to the Council at 222 East Superior Street, Chicago 11.

FOURTH "DAREDEVIL DAVEY" COMIC BOOK ISSUED

The newest in the "Daredevil Davey" series of dental health comic books is *Daredevil Davey on the Trail,* which teaches children how to avoid tooth injuries on the playground, at school and at home.

Now available from the Order Department of the Association, the book is priced at $2.85 for 25 copies, $5.15 for 50 copies and $8.85 for 100 copies.

FILM LIBRARY SURVEYS SCHOOLS, SOCIETIES

A survey currently is being conducted to provide guidance to the Association's Film Library in improving service to constituent and component dental societies and to dental schools, it has been announced by Miss Helaine Levin, film librarian of the Bureau of Library and Indexing Service.

The questionnaire sent to the societies and schools seeks to determine the film equipment available to each, the type of distribution and the demand for films.

Since the establishment of the Film Library in January 1952, the Association has increased its film collection by 125 per cent, Miss Levin announced. A catalogue of Library films, together with reviews by dental authorities and other pertinent information, is now in production and will be distributed on its completion.

Dental Societies

ESSAYISTS LISTED FOR MID-CONTINENT CONGRESS

The St. Louis Dental Society has announced the featured essayists for its 1953 Mid-Continent Dental Congress, to be held November 16-18 at the Jefferson Hotel, St. Louis.

Participants will include Edward L. Ball of Cincinnati; Ralph Boos of Minneapolis, Louis I. Grossman of Philadelphia, Jerome S. Grosby of St. Louis, Rex G. Ingraham of Los Angeles, LeRoy E. Kurth of Chicago, Ralph G. Peterson of Minneapolis, Roy M. Wolff of St. Louis, E. R. Granger of Mt. Vernon, N. Y., and Miss G. Archanna Morrison of Roxbury, Mass.

Limited attendance clinics, table clinics, scientific exhibits, a motion picture program and commercial exhibits will also be included in the program.

Further information may be obtained from the Society at 8013 Maryland Avenue, St. Louis 5.

CHICAGO DENTAL SOCIETY OPENS ANNUAL ESSAY CONTEST

The Chicago Dental Society opened its thirteenth annual prize essay competition June 5 with the announcement that a $500 award will be conferred on the entrant who submits the best essay representing an original investigation and containing "new, significant material of value to dentistry."

Fifty-year membership certificates were awarded May 5 to these five members of the Spokane District Dental Society at a banquet in their honor. Standing (l. to r.) are A. H. Woolson, a 1903 graduate of Northwestern Dental School; G. D. Williams, a 1903 graduate of the University of Minnesota dental school, and Robert Bell, a 1903 graduate of the Chicago College of Dental Surgery. Seated are D. R. Brockman, 1899 graduate of Western Dental College, and Fanny Z. Miner, a 1903 graduate of the same College. Dr. Brockman and Dr. Miner are brother and sister.

The author of the prize-winning essay will be invited to present it at the 1954 Midwinter Meeting of the Chicago Dental Society next February. If no essay is judged to be of prize-winning caliber, the event will be declared "no contest."

Application forms and rules may be obtained by writing to the Chicago Dental Society, 30 North Michigan Avenue, Chicago 2. The completed forms must be filed with the Society before September 1.

Dental Education

OTTO W. BRANDHORST RETIRES AS DEAN AT WASHINGTON

The retirement of Otto W. Brandhorst as dean of the Washington University School of Dentistry, St. Louis, was announced June 8 by University Chancellor A. H. Compton.

Dr. Brandhorst, dean since 1945 and a faculty member since 1915, will retire from the dental school July 1 and will devote full time to his dental practice in St. Louis. He is currently president of the American Dental Association.

He will be succeeded by Leroy Boling, assistant dean and professor of anatomy. Dr. Boling, who is not a dentist, has been a staff member of the dental school since 1930.

Like Dr. Brandhorst, Dr. Boling is an alumnus of the University, having received his master of science and doctor of philosophy degrees from the school.

UNIVERSITY OF PENNSYLVANIA HONORS TWO DENTAL LEADERS

Two members of the dental profession, Harold Hillenbrand of Chicago and Herbert Kurtz Cooper of Lancaster, Pa., were awarded honorary Doctor of Science degrees June 10 at the 197th commencement of the University of Pennsylvania.

Dr. Cooper, a faculty member of the dental schools of the University of Pennsylvania and Tufts College, is director of the Lancaster Cleft Palate Clinic and recently became the first dentist to be

named to the Council of Chief Consultants of the Veterans Administration. He is a past president of the Pennsylvania State Dental Society and a recipient of the Benjamin Rush Award of the State Medical Society in 1947.

Dr. Hillenbrand, secretary of the American Dental Association since 1947, is a former editor of publications of the Chicago Dental Society, Illinois State Dental Society and American Dental Association. Active in international dental affairs, he is an honorary member of the British, Canadian, Finnish, Greek and Norwegian Dental Associations. He holds an honorary award from the Republic of France and an honorary M.D.S. from the National University of Ireland.

GEORGE W. TEUSCHER NAMED DEAN AT NORTHWESTERN

The new dean of the Northwestern University Dental School is George W. Teuscher of Chicago, who succeeds Charles W. Freeman, now professor of oral surgery.

Dr. Teuscher's appointment was announced June 17 and became effective July 1. Chairman of the pedodontics department since 1935, he holds four degrees from Northwestern, a D.D.S. and M.S.D. from the Dental School and an M.A. and Ph.D. from its College of Education. He is a clinical assistant in surgery at the University Medical School and a staff member of Wesley Memorial Hospital.

ROY J. RINEHART NAMED UNIVERSITY'S INTERIM CHIEF

Roy J. Rinehart, dean of the University of Kansas City dental school, was appointed June 1 as temporary head of the University, to succeed the recently resigned president.

Dr. Rinehart will continue as dean of the dental school, but will assume the duties of the University's chief executive until a new permanent president is selected.

Dean of the dental school for 37 years, Dr. Rinehart has developed the school from commercial to university level. He helped to bring about the merger of Western Dental College and Kansas City Dental College in 1919 and the affiliation of the Kansas City-Western Dental College with the University of Kansas City in 1941.

Dr. Rinehart, 71, was president of the American Association of Dental Schools in 1948 and has been a delegate to the annual sessions of the American Dental Association 34 times. He is a member and officer of many professional organizations.

The Kansas City Star, in an editorial on the appointment, contained the following statement:

The temporary direction is an added burden for Dr. Rinehart who will continue as dean of the school of dentistry. But he is unusually well qualified for the important job immediately at hand. He is the capable administrator and leader who brought the dental school through difficult periods to its present national reputation. And he commands general confidence.

LEROY M. ENNIS APPOINTED VISITING PROFESSOR IN EGYPT

LeRoy M. Ennis, professor of oral roentgenology at the University of Pennsylvania dental school, has accepted a Fulbright professorship to teach at the dental school of Fouad I University in Cairo, Egypt, during the 1953-54 school year. He will leave September 1 for a year's stay in Egypt.

In addition to teaching, Dr. Ennis has been asked to assist Egyptian educators in efforts to modernize teaching methods and dental practices.

Former president of the Association, Dr. Ennis went to Japan as a member

of the Association's mission to examine and report on the condition of Japanese dental education and practice. In 1946, Dr. Ennis traveled to The Netherlands as a member of the Ivy Cross Expedition, which assisted in the rehabilitation of postwar dentistry.

BASIL G. BIBBY TO LECTURE AT NEW ZEALAND UNIVERSITY

Basil G. Bibby of Rochester, N. Y., director of the Eastman Dental Dispensary and professor of dentistry at the University of Rochester School of Medicine and Dentistry, has been awarded a Fulbright lectureship for the July-December period at the University of Otago in New Zealand.

At the University, where Dr. Bibby received his first dental degree, he will lecture on dental research in the United States and will assist various research projects at the school. He is also scheduled to present reports before the New Zealand Dental Association and other dental organizations in Australia and New Zealand.

International

NEW EDITOR APPOINTED TO CANADIAN DENTAL JOURNAL

The new editor of the *Journal of the Canadian Dental Association* is Wesley J. Dunn of Toronto, who succeeds M. H. Garvin of Winnipeg, editor of the publication from 1934 until his recent resignation.

Dr. Dunn is a graduate of the Faculty of Dentistry, University of Toronto and has practiced in Toronto since his graduation in 1947.

The new headquarters of the *Journal of the Canadian Dental Association* is 234 St. George Street, Toronto, Ontario, Canada.

B. J. WOOD RETIRES AS EDITOR OF *BRITISH DENTAL JOURNAL*

Bryan J. Wood of London, past president of the British Dental Association and officer of many other organizations, has announced his retirement as editor of the *British Dental Journal* as of June 30. His successor has not been announced.

AUSTRIAN DENTAL CONGRESS TO BE HELD SEPTEMBER 10-13

Five panel discussions will highlight the Congress of Austrian Dentists, which will be held September 10-13 in Bad Aussee, Austria. Eminent dentists of Switzerland, France, Italy and Germany, as well as Austria, will participate.

"Elimination of the Bacterial Infection from the Root Canal," will be presented in the conservative dentistry section;

"Improvement of Technic with Acrylic Material in Dentistry," and "Retainer for Bridge Work," in the prosthetics section;

"Surgery as an Aid in Dentistry," in the maxillofacial surgery section;

"Cooperation of Different Methods of Treatment in Orthodontic Dentistry," in the orthodontic section.

Essays and table clinics will also be presented.

Reservations for accommodations may be made before September 1 by writing to R. Trauner, University of Graz Dental Clinic, Auenbruggerstrasse 2, Graz, Austria.

FRENCH DENTAL CONGRESS TO MEET OCTOBER 5-10

An invitation has been extended to all interested dentists to participate in the thirteenth French Congress of Stomatology, which will be held October 5-10 in Paris.

Grafts in maxillofacial surgery and the study of fibrous bone pathology of the maxillae will be the subjects of two featured reports. Panel discussions will be conducted on methods recently employed for the taking of impressions and dental implantations and supports of artificial teeth.

Further information on the Congress may be obtained by addressing Docteur Descrozailles, 21, Boulevard Henri IV, Paris 4e, France.

WORLD HEALTH ASSEMBLY URGES W.H.O. DENTAL PROGRAM

The inauguration of a dental program by the World Health Organization was recommended May 20 to the WHO Director-General by the Sixth World Health Assembly.

The recommendation was approved after the discussion of a petition addressed to the Assembly by the Fédération Dentaire Internationale, which urged the appointment of a full-time dental consultant to the staff of the Director-General.

ECUADOR DENTAL ASSOCIATION LISTS 1953-54 OFFICERS

Officers of the Dental Association of Ecuador (F.O.E.) for 1953-54 are: José Julio Páez R., president; Cristóbal Troyal A., vice-president; Juan Eduardo Mora G., secretary; César I. Pintado U., assistant secretary-librarian; Luis H. Castillo C., treasurer.

Board members for 1953-54 are Manuel V. Bastidas, Mercedes de Mora, Alfredo Santos and Luis Arteaga. Headquarters of the F.O.E. are at P.O. Box 2046, Quito, Ecuador.

National Defense

AIR FORCES IN EUROPE NAME CHIEF DENTAL CONSULTANT

For the first time, the United States Air Forces in Europe have appointed a dental consultant to the Air Surgeon, it was announced June 2 by USAFE headquarters.

The appointee is Lt. Col. Benjamin W. Dunn, USAF (DC), chief of the dental division of the 495th Medical Group in Wiesbaden, who will advise Maj. Gen. Dan C. Ogle, Air Surgeon of USAFE in dental prosthetics.

Colonel Dunn will assist General Ogle in planning prosthetics laboratories and will visit dental clinics in the command to improve facilities and to teach the latest technics to technicians in the field. A graduate of the Kansas City-Western Dental College in 1935, Colonel Dunn has been in the Armed Forces since 1938.

ARMED FORCES INSTITUTE ANNOUNCES 1954 CONSULTANTS

Myron Aisenberg of Baltimore, Paul E. Boyle of Philadelphia, Lester R. Cahn of New York and Joseph P. Weinmann of Chicago have accepted appointments as resident consultants in oral pathology at the Armed Forces Institute of Pathology, Washington, D. C.

Their appointments for the fiscal year 1954 were announced June 5 by Col. Joseph L. Bernier, chief of the dental and oral pathology section of the Institute.

"These consultants will engage in studies on the Institute's material in collaboration with members of the dental and oral pathology section," announced Colonel Bernier.

W. T. Sweeney

Research

FULBRIGHT PROGRAM OFFERS RESEARCH, TEACHING ABROAD

Fulbright awards for university lecturing and postdoctoral-level research are being offered for 1954-55 in Europe, the Near East, Japan and Pakistan, it has been announced by the Committee on International Exchange of Persons.

Application forms and additional information on the competition for these awards may be obtained from the Conference Board of Associated Research Councils, Committee on International Exchange of Persons, 2101 Constitution Avenue, Washington 25, D. C.

Applications for the awards must be postmarked no later than October 15, 1953, it has been announced by the Committee.

WILLIAM SWEENEY TO DIRECT DENTAL RESEARCH AT N.B.S.

William T. Sweeney, a former research associate for the American Dental Association, has been appointed chief of the dental research section of the National Bureau of Standards. He will be in charge of the cooperative research program on dental materials sponsored by the American Dental Association, the federal dental services and the National Bureau of Standards.

Mr. Sweeney succeeds Irl C. Schoonover, chief of the section since 1945, who was appointed chief of the polymer structure section when it was organized last year. Dr. Schoonover has continued as acting chief of the dental research section during the past year.

A staff member of the dental research section during the years 1922-1941, Mr. Sweeney was a research associate for the Association during 1932-1941. He directed research for a dental manufacturing firm during 1941-48 and was a research associate at the University of Michigan in 1948-49. In July 1949 he returned to the National Bureau of Standards as a physicist in the expanded cooperative program under the direction of Dr. Schoonover.

FLUORIDATION RE-ENDORSED BY STATE DENTAL SOCIETIES

Resolutions urging the fluoridation of community water supplies have been adopted by the state dental societies of Indiana, Massachusetts, Michigan, Montana, Nebraska, New York, Oregon, Pennsylvania, Tennessee and Texas. A similar resolution has been adopted by the Medical Association of Georgia.

In last month's issue were reported the pro-fluoridation resolutions passed by the Arkansas State Dental Association, the New Jersey Association and the Minneapolis District Dental Society.

General

LEGENDS TO BE REVERSED IN MAY 1953 ARTICLE

In the May 1953 issue of THE JOURNAL, legends were reversed for figures 15 and 16 on page 523, it is reported by Louis Blatterfein, author of the article. Readers are asked to indicate in their file copies of THE JOURNAL that the legends should be transposed.

ACADEMY OF PERIODONTOLOGY TO MEET SEPTEMBER 24-26

The 37th annual meeting of the American Academy of Periodontology, to be held September 24-26 at the Cleveland Hotel, Cleveland, will be open to nonmembers as well as members.

A nominal registration fee will be charged nonmembers, it has been announced by Clarke E. Chamberlain of Peoria, secretary. Inquiries may be addressed to Dr. Chamberlain at 115 North Street, Peoria 5, Ill.

DENVER ORTHODONTIC MEETING PLANNED FOR AUGUST 2-7

The Denver Summer Meeting for the Advancement of Orthodontic Practice and Research, Inc., formerly known as the Denver Summer Seminar, will meet August 2-7 at the Park Lane Hotel in Denver, it has been announced by Jack E. O'Donnell of Wichita, Kan., chairman.

Discussion leaders will be Wilton M. Krogman of Philadelphia, Donald C. MacEwan of Seattle, H. C. Pollock of St. Louis and Allan S. Richardson of Denver. A gadget clinic and panel discussions will also be held.

Inquiries may be addressed to Ernest T. Klein, secretary, 632 Republic Building, Denver 2.

OFFICER OF 1953 SESSION, J. V. GENTILLY, DIES

James V. Gentilly of Cleveland, vice chairman of the 1953 annual session and former vice-president of the Association in 1940, died June 1 at the age of 64 while on a fishing trip in Canada.

Dr. Gentilly had practiced dentistry in Cleveland for 39 years, since his graduation from Western Reserve University Dental School. He had served as secretary, treasurer and president of the Cleveland Dental Society, president of the Ohio State Dental Association and for many years one of its delegates to the American Dental Association.

For the past nine years, he had been editor of *Desmos* magazine of Delta Sigma Delta fraternity.

In activities of the American Dental Association, Dr. Gentilly was a member of the Judicial Council for 14 years and of the National Board of Dental Examiners for 5 years. In 1940, he served as general chairman of the Association's annual session in Cleveland, where he was elected first vice-president.

J. V. Gentilly

One of the best amateur magicians in the United States, Dr. Gentilly also attained distinction as an artist and sculptor.

NEW ORGANIZATION LISTS MEMBERSHIP REQUIREMENTS

Requirements for membership in the recently-organized Academy of General Dentistry have been announced by Albert L. Knab of Chicago, secretary. The requirements are:

1. An applicant for membership must be a member of the American Dental Association.
2. In order to maintain his good standing in the Academy a member must attend at least one-half of the scientific meetings of his local branch.
3. He must take at least 50 hours of postgraduate work at an accredited university every three years.
4. He must spend at least 100 hours every three years at seminars, discussion groups, hospital meetings, round tables or other dental meetings. The time spent in "2" above is credited toward this 100 hour requirement.

During the current year, a candidate will be eligible for membership in the Academy if he has completed 16⅔ hours of University postgraduate work since October 1951, Dr. Knab announced.

Inquiries must be addressed to Dr. Knab at 8500 Stony Island Avenue, Chicago.

PUBLISH REPORT OF MEETING ON MEDICINE, CIVIL DEFENSE

The reports of the Third Medical Conference on Civil Defense are available at a cost of $5.00 per copy, it has been announced by Carroll Paul Hungate of Kansas City. Dentists interested in obtaining copies of the reports may address their orders to Dr. Hungate, 306 East 12th Street, Kansas City, Mo.

Shown at the capping ceremony of dental assistants at Lux College, San Francisco, are faculty, guests, administrators and students. In the top row (l. to r.) are: Mrs. Edmund V. Street; Harry True of the College of Physicians and Surgeons; Sarah Helen Brown, director of Lux College; Charles L. Lewis, president of the Lux Board of Trustees; Harold Hillenbrand, secretary of the Association, and six San Francisco dentists: William S. Smith, Edmund V. Street, Bertram L. Wolfsohn, Fred H. Nestler, Henry Trowbridge and Joe G. Sweat, II.

In the third row (l. to r.) are: Irena Humphrey, secretary, San Francisco Dental Assistants Association; Betty McCarra, president of the association; Yolanda Cosens, president of the Northern California Dental Assistants Association; Mary Ann Whalley, 11th district trustee, American Dental Assistants Association; Margaret Crave, Jr., past president of the Northern California Dental Assistants Association; four San Francisco dental assistants: Betty Wolf, Patricia Weiss, Betty Jones and Frances MacDonald.

Shown at St. Paul Lutheran School of Melrose Park, Ill., are representatives from each of 25 consecutive classes to be graduated from the school with teeth in a caries-free condition. In the front row are: extreme left, Miss Tracy Yohnke, school nurse who originated the program for caries-free graduating classes; center, the president of the 1953 class, who holds an award from the Illinois Department of Public Health; extreme right, Mrs. Pauline Luhersen, the present school nurse.

Paul Topel of Chicago, who has volunteered his services to the school for many years as dental examiner and adviser, is in the center of the back row. Dr. Topel received a special award from the Chicago Dental Society, citing his outstanding contribution "to organized dentistry and community health." Miss Yohnke received an award from the Illinois State Dental Society.

PAUL H. BELDING DIES: *DENTAL ITEMS* EDITOR

Paul H. Belding of Waucoma, Iowa, editor of *Dental Items of Interest*, died June 3 at the age of 57. He had been editor of the proprietary dental journal from 1937 until his death and was a nationally known personality. He had practiced in Waucoma since his graduation from the University of Iowa College of Dentistry in 1919. He is survived by his wife and four children.

WOMEN DENTISTS' ASSOCIATION TO MEET SEPTEMBER 27-28

The Association of American Women Dentists will install Bertha Eastwood of Philadelphia as president of the organization for 1953-54 at the annual meeting of the A.A.W.D., to be held September 27-28 in the Carter Hotel, Cleveland.

Information on the annual meeting and the organization may be obtained by writing to Florence Rich, secretary, 6508 Delmar Avenue, St. Louis 5.

Also . . . Carl R. Gray, Jr., has resigned as Veterans Administrator, effective June 30, after a five and one-half year term. Acting head of the agency is H. V. Stirling, deputy administrator. . . . A record total of $103,438.04 had been contributed to the 1952-53 Relief Fund drive of the Association as of June 15. The drive ended June 30. . . . The magazine *D.D.S.* suspended publication with the June 1953 issue. . . . The 1954 edition of *Dental Aptitude Testing Program*, a booklet of information on predental and dental studies, the aptitude test, testing dates, centers and fees for 1954, has been published by the Council on Dental Education's Division of Educational Measurements. More than 45,000 copies were distributed last year through the dental schools and the Division's office.

The William J. Gies Foundation for the Advancement of Dentistry, Inc.

The paucity of funds for dental research and the less than mild interest shown in the subject of those outside the profession have long been known and long deeply regretted. Few philanthropic foundations in the United States have any interest in the problems of dentistry or in contributing funds toward their solution. Even the federal government with seemingly unlimited resources on which to draw for almost every purpose imaginable shows little interest in dental research and appropriates little toward it. It becomes increasingly clear that if dental research is to move forward the dental profession must back it wholeheartedly. It is for that purpose that the William J. Gies Foundation for the Advancement of Dentistry, Inc. was formed. The following few paragraphs, excerpts from Arthur Merritt's presidential address of last January, present the purposes of the Gies Foundation and urge the support of the profession.

In 1936 an informal committee came together in the City of New York for the purpose of raising an endowment fund of $50,000 to be used for the support of the *Journal of Dental Research,* which, since its foundation in 1919 and because of its refusal to accept income from advertisements, had suffered an annual deficit of approximately $2,000. With a view to correcting this situation, the said committee undertook a nationwide campaign for financial support among the members of the dental profession. The campaign continued for several years, during which time more than 600 individual members of the profession and several dental organizations contributed to the Fund. These contributions as received were invested in U.S. Government bonds having a face value at maturity of $56,000.

In announcing the purpose of the Fund it was stated: "If at any time the *Journal of Dental Research* should become self-supporting, the income would be used for research or any other worthy object in dentistry."[1]

In 1937 the *Journal of Dental Research* was transferred by gift to the International Association for Dental Research, and in time it became self-supporting. Under these circumstances, and following legal advice, it was decided to terminate the informal status of the fund-raising committee and instead to create a corporate body to be known as The William J. Gies Foundation for the Advancement of Dentistry, Inc. to which all funds then in the hands of the committee were later to be transferred. This was done on June 22, 1950, and the organization subsequently was given a tax-exempt status.

After the incorporation of the Foundation and in compliance with legal requirements, a Board of Directors was formed, most of whom previously had

1. Merritt, A. H. I. William J. Gies Endowment Committee for the Journal of Dental Research. J. D. Res. 15:457 Dec. 1936.

been members of the fund-raising committee. From among these a president, an executive vice-president, a secretary and a treasurer were elected.

Since its incorporation an anonymous donor, acting through Dr. Gies, has made a contribution of $10,000 to the Foundation. Later the Journal of Dental Research, Inc., which had become inactive and was about to be dissolved, provided a fund of $3,742.87 which, through the good offices of Dr. Gies, was donated to the Foundation. Subsequently an additional gift of $6,257.13 by an anonymous donor (known only to Dr. Gies) was added to the Fund. By provision of the Foundation's charter, only the income from the Fund can be used, except contributions stated by their donors to be available for current expenses.

In line with its objective, several initial grants have been made as indicated in the treasurer's report.

If the Foundation is to meet its responsibility; namely, the advancement of dentistry, it must be given widespread publicity and financial support. This cannot be too strongly emphasized. The advancement of dentistry should be the concern of every member of the dental profession. An active campaign should be undertaken, therefore, at the earliest possible time to enlist the interest and support of the profession and also that of the public who will in the end be the chief beneficiaries. If the Foundation is to achieve its goal, generous support from the public and the profession will be required since its success depends in large measure on its financial resources. These must be substantially increased if it is to fulfill the purpose for which it was organized.

And further, there is the debt which the profession owes Dr. Gies, who for more than 40 years has given of his time, talents and resources to the progress of dentistry. In no way can the profession more appropriately express its appreciation of his unparalleled service than by the wholehearted support of the William J. Gies Foundation for the Advancement of Dentistry, Inc.

Arthur H. Merritt

The Reader Comments

THE JOURNAL *devotes this section to comment by readers on topics of current interest to dentistry. The editor reserves the right to edit all communications to fit available space and requires that all letters be signed. Signatures will be deleted before publication at the request of the author. Printed communications do not necessarily reflect the opinion or official policy of the Association. Your participation in this section is invited.*

The Editor

NEED FOR DRAFT OF DENTISTS

I rarely indulge in written polemics, but I was quite aroused by the opinions expressed by Carlton Brehmer in his letter to "The Reader Comments," printed in the May issue of THE JOURNAL.

I do not know whether Dr. Brehmer has been in the armed services of the United States; I assume that he has, because it would be even more astounding to see the same sentiments expressed by someone who has not carried his share of our national—and our professional—obligations.

However, whether he has or has not been in service, I can not agree with an opinion that takes such a small, narrow view of existing conditions and ignores the increased responsibility of every citizen of our country to support our nation at any time when its security and its freedoms are threatened, as patriotic citizens have done since the beginning of our country!

I would like to make it clear that I deplore the necessity for Public Law 779. I sympathize with any man who must disrupt his normal life to serve, but I feel that the "democratic rights" which Dr. Brehmer invokes are worth defending and I think I can speak for many when I say that, although I do not desire to return to active duty, I would be willing to go again, if necessary, for the purely selfish reason of protecting my family and my home, if for no other reason.

I do not like to see Public Law 779 invoked; there should be enough men volunteering to fill the needs of our Armed Forces. But, conditions being what they are, Public Law 779 is necessary to protect those who have fulfilled their federal obligations, by drafting dentists and physicians from those who have not yet served.

Our country gives us much; in recent years, it has had the unpleasant task of asking us for increased sacrifices in return. We should be fair enough to make these sacrifices when they are required of us.

Dr. Brehmer calls Public Law 779, "socialized medicine at its worst." This country has little socialization, as compared with practically all other nations; but we do have a police force, a socialized means of protecting civil lives and property, and we do have a Defense Department, a socialized means of protecting our Land. Public Law 779 can be grouped within this type of "socialism" as opposed to its alternative, material socialism, which is unthinkable. I regret that this discriminatory statute must exist, just as I deplore the huge cost of our defensive war, but "needs must when the devil drives."

To paraphrase an earlier American, if this be a preachment for socialization, make the most of it!

Joseph S. Bell, D.D.S., West Hartford, Conn.

REST POSITION OF THE MANDIBLE

In the January 1953 issue, F. W. Craddock of New Zealand called attention to my article of January 1951 in which M. E. Niswonger was said to be the first to mention "rest position of the mandible." Dr. Craddock stated that N. G. Bennett had mentioned it in the *Proceedings of the Royal Society of Medicine* (Section of Odontology) April 1908, page 79.

It is true that Bennett, as well as other writers, had mentioned "the normal position of rest of the mandible." The reason for my crediting Niswonger, however, was not because he mentioned the "rest position" but because he recognized its importance and value. Bennett and others mentioned it but gave it no significance.

The only use Bennett made of it was as a starting point to prove that the height of the bite could not be changed on an articulator. Bennett in these experiments came very close to solving the enigma of the axis; his diagrams clearly pointed to the existence of an

axis. Contrary to his findings, however, bites can now be altered with properly constructed articulators and the use of a hinge-bow.

Niswonger, Thompson and others were the first to show the relationship between the physiological rest position and the equilibrium and growth pattern of the head. Niswonger made practical use of the position by using it as a landmark for the lower border of the freeway space or clearance of the occlusion.

History honors the person who realizes the importance of a discovery. We hear little of Heinrich Hertz, who discovered the high frequency electric oscillator, but every school boy knows the name of Marconi, who 15 years later made the Hertz waves practical and sold them to the world.

Perhaps Dr. Craddock will agree that the esteemed and already immortal Bennett did not grasp the practical importance of this rest position of the mandible and that he would refuse the petty distinction that Dr. Craddock requests.

William Roy Eberle, D.D.S., Chicago

SUPPORTS OASI FOR DENTISTS

I am in accord with the viewpoint of E. W. Fellows, D.D.S., as expressed in his letter in the May issue of THE JOURNAL. A majority of the members of the Association would seek OASI coverage if they were given a chance to express their choice. The inclusion of dentists in OASI would be a forward, helpful and gratifying piece of legislature for the Association to support.

M. A. Levine, D.D.S., Brooklyn, N. Y.

THE CASE FOR OASI COVERAGE

I considered it unjust for the House of Delegates of the American Dental Association to vote again OASI for dentists. Why take such an undemocratic attitude? Thousands of our members want it and are in need of it—$80 to $120 each month would be a godsend and would assure at least rental money for our few remaining years.

Those who do not desire Old Age and Survivors' Insurance need not apply for it, but they have no right to deprive the rest of us of this privilege. Some of our members are so narrow-minded and conservative that they brand every such action as "socialization."

I do hope that other Association members will realize that it is one's duty to assist, not hinder, affairs that might bring relief and happiness to some of our members.

Augustus Kahn, D.D.S., New York, N. Y.

RESEARCH ON SELF-CURING RESINS

In the April 1951 issue of THE JOURNAL the Councils on Dental Research and on Dental Therapeutics published a status report on the reactions of the pulp to self-curing resinous filling materials. In the same issue appeared an editorial concerned with these materials, under the heading "Further Research Needed . . ."

In the March 1953 issue appears an article by L. J. Grossman entitled "Pulp Reaction to the Insertion of Self-Curing Resin Filling Materials." The contents of this paper are similar to the material given by the author two years earlier to the Councils on Dental Research and on Dental Therapeutics.

This type of "research" must be dismissed as not based upon facts—the answers to the questionnaire sent by Dr. Grossman are only impressions. One of the dentists answering the questionnaire stated that he did not insert the resinous filling material in the tooth in which the pulp died but that the patient's former dentist had done so. Another one stated that the tooth was filled for 30 years with silicate. After the silicate was replaced with a resin, the trouble started. In the latter case the pulp may have been damaged already by the silicate, and replacement with any material could have caused the pulp to act up. No one can tell about the pathological state of pulp tissue at the time of insertion of a restoration, especially if the tooth was restored by someone else.

Unfortunately, many dentists who read THE JOURNAL took Grossman's paper as the research asked for by your editorial two years earlier. This is particularly unfortunate because his paper does not present new research—it only took time to get published. Since this paper was written, the technics used with resinous materials have been improved (notably brush technic) and even the chemical constituents of these materials have changed.

Helmut A. Zander, Minneapolis

Book Reviews

DENTAL ANATOMY

By Moses Diamond. Third edition. 471 pages with 366 illustrations, 10 in color. Index. Price $15. New York, The Macmillan Co., 1952.

The author unfortunately passed away just as his work of many years was approaching a climax. At the time of his death, the manuscript for this edition was practically completed. His son, Eli C. Diamond, not a dentist but closely associated with his father during the past decade, assumed the responsibility for the final assembly of the manuscript for publication.

While nominally a new edition, the present volume is in effect a new book. This edition is far more comprehensive than the previous one. The lapse of time since the publication of the second edition of this work in 1935 has given the author ample opportunity for a thorough revision, while much new material has been added. These additions make the book outstanding among textbooks on dental anatomy.

The book is larger in page size and contains 162 more pages than the previous edition. The print is much clearer. The illustrative contents are exceptionally satisfactory. They include photomicrographs, roentgenographic reproductions, line drawings and 36 plates, 10 colored. A notable feature is the comprehensive bibliography which is uniquely listed close to the end of the volume.

The present edition is more than a textbook on dental anatomy. However, if one were to be critical, it might be said that the author attempted to cover too much ground. In addition to the atlas, Chapters 15-19 could well have been omitted. They concern the muscles of the head and neck, the oral cavity and its soft tissues, the vascular system, the nervous system and temporomandibular articulation. William M. Rogers deserves commendation for his untiring efforts in the collaboration of the preceding chapters and in the preparation of the dissections from which the illustrations in both series A and B in the atlas were drawn.

Throughout the text such terms as *x-ray*, *radiograph* and *radiogram* are used either in the single or plural form to denote a noun, while *x-raying* is used as a verb. This terminology is obsolete and should have been brought up-to-date with the present accepted nomenclature. Too bad that a glossary which appeared in the previous editions was omitted in the present volume. Nevertheless, the book as a whole is a most commendable presentation of the subject. It provides a good text for students and an excellent review for the practicing dentist.

The untimely death of Dr. Diamond, a recognized authority in the field of dental anatomy, was a great misfortune, but his work will long endure as a monument to his acumen.

E. Alan Lieban

PARODONTAL DISEASE

By E. Wilfred Fish. Second edition. 252 pages with 87 illustrations. Index. Price 30 shillings. London, Eyre & Spottiswoode, 1952.

This second edition of Fish's book has been considerably revised and extended. A new chapter covering occlusal trauma and parodontal splints has been added which, as Fish states, is necessitated by the increasing amount of attention that has been paid to the role of occlusal disharmonies in periodontal pathology. "A careful review of the pathology of this disease, however, does not seem to lend much support to the belief that occlusal trauma is the original cause of the ulceration and the deepening of the parodontal sulci which are the essential features of parodontal breakdown." This paragraph clearly mirrors Fish's thought as to the etiologic importance of occlusal trauma.

In the first chapter, "Nature and Aetiology of Parodontal Disease," Fish tries to explain the secondary role trauma plays in loosening of the teeth and classifies periodontal diseases as follows: "marginal gingivitis, pyorrhoea simplex, pyorrhoea profunda." This classification is extended in chapter 3 into the following groups: Group I—degenerations and abnormalities of growth; Group II—inflammations; Group III—neoplasias.

In the succeeding chapters, the different problems of therapy are discussed and much attention is given to the proper method of home care with brush and wood points.

On the question of "reattachment," Fish is brief and negative. In his summary he states: "Reattachment in pyorrhoea is a physiological impossibility."

Three chapters are devoted to planning and methods of treatment and to a discussion of

complications and difficulties of treatment, such as hemorrhage, abscess formation, postoperative discomfort, persistence to tenderness, sensitivity of necks of teeth.

The new chapter (9) deals with occlusal trauma and parodontal splints. The author introduces his discussion with the following paragraph: "It now remains to consider what can be done for a patient who finds, after the ulceration is cured, that his teeth are already loose, that is for one who has lost so much of the periodontal attachment of some of the teeth that the remaining attachment is threatened with destruction by the mechanical trauma of ordinary mastication."

Fish states that there are two ways to relieve mechanical trauma: "The occlusal contacts of the teeth may be ground—or alternatively, the teeth may be splinted together, either by a fixed splint or a removable one."

Fish finds grinding inadequate and recommends splinting. "A parodontal splint is an appliance designed to mitigate the lateral stresses of mastication on individual teeth by affording them mutual support." Removable splints are advocated by Fish.

Partial denture design and construction is discussed in connection with splinting in periodontal treatment. An appendix deals with "A new principle in partial denture design." The novelty of the proposal contained in this paper consists in the suggestion that the 'plate' on which the teeth are set, should be cast to fit over the occlusal and lingual surfaces of the remaining teeth instead of being cast to fit the edentulous alveolar ridge or the palate and the ridge, as does the base or saddle in the existing types of partial denture."

One does not have to follow advice all the time, nor all the advice that is given. One can enjoy this book one way or another—it is highly recommended!

Balint Orban

ORAL MANIFESTATIONS OF OCCUPATIONAL ORIGIN, AN ANNOTATED BIBLIOGRAPHY

By F. J. Walters, J. W. Fridl, Raymond L. Nelson and Jon W. Trost. 41 pages. Index. Price 20 cents. Washington, D. C., United States Government Printing Office, 1953.

This annotated bibliography brings together sources of information on oral conditions associated with occupations, as an aid to dentists and other health workers interested in this subject. The 138 short articles are grouped according to types of exposure such as: acids, bacteria, dusts, gases, inorganic compounds, organic compounds, metals and physical factors. Articles referring to several types of exposure are classified in a chapter entitled "General Review." Articles dealing with occupational cancer are placed in a separate category. The types of exposure within each category are listed alphabetically.

Although the authors made every attempt to search the literature thoroughly, some pertinent material may have been overlooked. Despite this fact the compact material presented in this little volume provides succinctly the best available information on the subject.

APPLIED PHYSIOLOGY

By Samson Wright, with the collobora-tion of Montague Maizels and John B. Jepson. Ninth edition. 1,190 pages with 688 illustrations and 4 colored plates. Index. Price $9. London, Oxford University Press, 1952.

To one accustomed to treatises on physiology, this text offers a striking departure from the order in which material is usually presented. Instead of opening with the subject of muscle and nerve activity (as the vast majority of texts do), Professor Wright strikes at the core of all physiology: regulation of constancy of internal environment. Since the purpose of the existence and operation of all the specialized organs of digestion, absorption, blood circulation, respiration and excretion is to aid in maintaining this constancy, the present approach to the study of physiology seems most logical.

In glancing through the pages on respiration, the American reader is a little surprised at the treatment accorded manual artificial respiration. A full page is devoted to Schaefer's and to Eve's rocking method; even the electrophrenic method receives a two-line notice in a footnote. No mention, however, is made of the back pressure-arm lifting (Nielson's) method, a method which has been endorsed by the National Red Cross and other organizations as superior to the Schaefer method.

As stated in the preface to the first edition, the text is intended for medical readers, and throughout all its pages the author makes abundant use of clinical material. It is, in the true sense of the word, an applied physiology. Realizing that some of this wealth of material may not be of direct value to a student and may even go beyond his depth, the author states frankly in the preface: ". . . I leave it to the good sense of the individual

reader to concentrate on his needs and to ignore what he considers to be outside his field of interest. In this way he can make the book as long or as short as he wishes." Considering the brevity with which the subjects of greatest interest to the student or practitioner of dentistry are dealt with, for them, I fear, this ponderous tome will shrink to an alarming extent.

The book is printed on excellent paper and is profusely illustrated. Nearly all quantitative relations between physiological phenomena are graphically illustrated. The author values these illustrations and diagrams greatly as aids in comprehending the text. In fact, in the preface he expresses his doubts as to whether in general illustrations are properly and adequately used by the reader. To teach the student how to get the full value out of illustrations, he devotes a little better than four pages of the appendix to the detailed study of an arterial blood pressure tracing. This is not only a unique textbook procedure but one which every teacher might well study.

W. D. Zoethout

BLOOD CLOTTING AND ALLIED PROBLEMS

Edited by Joseph E. Flynn, M.D. 368 pages with 148 illustrative graphs. Index. Price $4.95. New York, N. Y., The Josiah Macy, Jr., Foundation, 1952.

This book is a report of the Fifth Conference on Blood Clotting and Allied Problems. It was conducted by 19 men who are considered authorities on the subject from the United States and Canada. Eleven guests were also in the group which included foreign representation.

The medical director, in his introductory remarks, states that everyone in the health field is interested in furthering knowledge about blood clotting and allied problems, and points out that the continued isolation of the several branches of science is a serious obstacle to scientific progress. He makes it clear that by bringing together specialists in several fields for free discussion on the subject he hopes that more information may be obtained than by a single approach to the subject. The transcript of this conference consists of short papers followed by considerable discussion.

A portion of the discussion concerns the anticoagulants, drugs which are used to protect the patient from thrombo-embolic complications. These drugs are of interest to the dental practitioner primarily because a patient under treatment with one of them is likely to bleed excessively following surgical intervention.

Another section of the book is devoted to a discussion of new blood clotting factors. In this section the mechanism of the formation of the blood clot is thoroughly discussed and is illustrated with graphs. The book continues with a discussion of defects in hemostasis, largely those created by irradiation; it is concluded by a dissertation and discussion on "Fibrinolysin and Antifibrinolysin: A Proteolytic Enzyme System in Blood."

Although the reviewer does not feel that he has sufficient knowledge of intricate physiology to evaluate the book fairly, it would seem that it should have a particular appeal to the highly trained hematologist.

Warren R. Schram

HISTOLOGY

By Alexander A. Maximow and William Bloom. Sixth edition. 616 pages with 986 illustrations, 257 in color, on 580 figures. Index. Price $10. Philadelphia and London, W. B. Saunders Co., 1952.

In this edition, leading investigators have contributed particular sections in their special field of competence. The result is a dynamic approach to human histology and to functional morphology.

The major changes in this edition are the inclusion of advances in endocrinology, and the histochemical and biophysical study of the submicroscopic structure of protoplasm. Large sections of the book have been rewritten and most chapters are revised.

The section on endocrine glands has been expanded and rewritten with a concise and separate chapter for the study of each gland. The chapter on the parathyroid glands includes an interesting reference to recent findings that parathyroid hormone can exert a local action on the bone causing its resorption. The term "absorption" employed in place of resorption is an oversight which can be corrected in the next printing. This chapter contains cross-references that call the reader's attention to the intimate interrelation and interdependence among the endocrine organs.

The chapter on the oral cavity and associated structures, while condensed, has four new colored illustrations on the salivary glands and tonsils. The chapter on teeth is also well illustrated and is one of the few chapters not shortened. Tooth development is given brief but adequate consideration.

Another chapter of special interest to the dentist is on bone. It is one of the largest chapters in the text, exceeded only by the

sections on the nervous and the female-reproductive systems. It would appear that for the primary purposes of a student text this chapter has been given more than proportionate attention.

The shortening and condensing of a textbook, in spite of the addition of considerable new material, is a heroic task which the author carried out in justice to the needs of the student whose curriculum tends to be overcrowded. The larger format and type make the book more readable. Several new colored and black and white photomicrographs add to the value of the text.

The dentist who is interested in biological sciences will do well to add this text to his library and use it for ready reference. This will facilitate his living up to G. V. Black's dictum that "the professional person cannot do other than be a continuous student."

Isaac Schour

A MANUAL OF DENTAL ANESTHESIA

By Harry Archer. 192 pages with 146 illustrations. Index. Price $5.50. Philadelphia, W. B. Saunders Co., 1952.

The author gives very important information in an exceedingly palatable form, easy language and a direct approach. He has had wide teaching and clinical experience and is certainly qualified to write such a factual book.

The text contains 13 chapters, the first of which gives a detailed history of anesthesia that is worth-while reading. The remaining twelve chapters are divided into two parts—"Local Anesthesia" and "General Anesthesia."

The five chapters in Part I deal on a practical basis with the following aspects of local anesthesia: anesthetic solutions, chemistry, action, idiosyncrasy, toxicity, indications and dosages (chapter 2); untoward systemic effects, contraindications, kinds and different types of injections (chapters 3 and 4); postinjection complications, syncope, pain, trismus, infections, toxic effects, ulcers, blanching of tissue, facial paralysis, temporary blindness, crossing of the eyes and technic for removal of mandibular needle (chapter 5).

Each of the seven chapters in Part II is very important to the man employing general anesthetics. Their subjects include: preanesthetic examination of the patient, preanesthetic and preoperative preparation of ambulatory patient, causes of mechanical respiratory embarrassment, oxygen want, emergency tracheotomy.

General anesthetic agents that may be used in the oral surgery office are explained as to their chemistry, induction, danger and complications, their prevention and correction. Other chapters deal with analgesia in the dental office, general anesthetics for oral surgery in the hospital, the legal aspects of anesthesia and the liability of the dentist and oral surgeon.

This book should be most helpful to the student, the dentist, the teacher and oral surgeon.

Russell G. Boothe

PHOTOGRAPHY THROUGH THE MICROSCOPE

By Eastman Kodak Co. 68 pages with 26 illustrations. Price $0.50. Rochester, N. Y., Eastman Kodak Co., 1952.

The author has attempted to give, in condensed form, pertinent information regarding the making of pictures through the microscope, utilizing both simple and complex equipment. It must be appreciated that such a highly specialized branch of photography cannot be treated thoroughly in a 68 page book. This book will introduce microscopy to the beginner and photography to those already familiar with the microscope. It is more or less of an elementary "how-to-do-it" booklet of direct interest in industry and education and to scientists in general—in fact, in practically all places where the camera and microscope are used together. Data are given for the characteristics of Kodak photographic materials and the transmission characteristics of various Wratten filters. There is also a very useful table for combinations of Bausch & Lomb condensers, objectives and oculars that should be invaluable to one not conversant with the various combinations that should be used together.

A complete and rather extensive data sheet for recording information pertinent to a photomicrograph is given and provides a complete record of exactly how a photomicrograph is made. This is an excellent idea; a picture made through the microscope without its attendant data is worse than no picture at all.

There are relatively few mistakes in the book and no doubt these might be typographical errors; essentially, the information is well written and authoritative. The book is well illustrated with various types of photographic set-ups—both amateur and professional. There are a number of excellent color illustrations showing various types of subject matter.

Charles S. Foster

CLINICAL PERIODONTOLOGY
DYNAMICS AND TREATMENT—
A BIOLOGIC APPROACH TO PRACTICE

By Abraham Berliner. 249 pages with 218 illustrations. Index and appendix. Price $18. New York, The Park Press, 1953.

In the author's preface the statement is made that "This manual . . . does not attempt to cover the entire field of periodontology. It represents, rather, a compilation of collected notes dealing with condensed, practical, readily available periodontal information specifically recommended for the treatment of the diseases of the supporting tissues of the teeth."

The text is divided into two parts: In the first, consideration is given to "Diagnosis: Functional Anatomy of the Supporting Tissues of the Teeth" and "Classification, Inflammation and Degeneration: Ligatures and Splints and Preparation for Instrumentation." Part two, of nearly 100 pages, deals with "Treatment; Instrumentation: Occlusion and The Bite Plane."

Each chapter is prefaced by an itemized list of the subject matter relating to the problem under discussion.

The consideration of treatment deals with the control and elimination of local factors, as well as with surgical procedures. It is recommended that the dentist "weigh the advantages of careful, frequent scaling of the teeth, and home treatment" by the patient, with those of "radical surgical procedures," and raises the question "Can calculus always be removed completely from the depth of the gingival pocket?" The answer, of course, would depend upon the experience, judgment and skill of the operator plus the depth and location of the pocket. The author's suggestion is that when the depth of the pocket is such as to preclude the maintenance of gingival health, surgical resection is the method of choice. This again would depend largely upon the skill of the operator.

The solution of the problem as given by the author is "the practitioner's role in preventive dentistry." When every dentist undertakes to prevent periodontal disorders the worst of the problem will be solved.

A. H. Merritt

INTRODUCTION TO DENTAL ANATOMY

By James Henderson Scott and Norman Barrington Bray Scott. 292 pages with 172 illustrations. Index. Price $7. Baltimore, The Williams and Wilkins Co., 1952.

The authors, in presenting this book, have achieved their purpose of filling a distinct gap in dental literature. Its subject, dental anatomy, although occupying a central position in dental education, too frequently is treated too lightly.

In many parts of the book, the subject matter is thoroughly covered before the clinical application is discussed. This is a very practical and refreshing method of presenting this sometimes "dry" subject.

The first 183 pages cover in a very clear manner the development of the face and teeth, the dentin, pulp, enamel, cement, the dental follicle and tooth eruption, periodontal membrane, shedding of teeth, movements of teeth, development of the jaws, growth of the face, the form and relation of the human teeth and dental development at different ages.

The remaining pages are outstanding in their coverage of evolution of the jaws and of the mandibular joint, tooth attachment and succession, comparative anatomy of the dental tissues, dentition of the primitive mammals, marsupials, insectivores, rodents, carnivores, ungulates, proboscidea and primates.

The authors are to be commended for giving this concise text to dentistry.

W. W. Demeritt

Current Literature

A NEW APPROACH TO THE ANALYSIS AND TREATMENT IN MIXED DENTITION

Silas J. Kloehn. Am. J. Orthodont. 39:161 March 1953.

The time to start orthodontic treatment is a basic problem of treatment in which the profession should have more uniformity of thought and practice.

Early treatment requires a change in analysis and treatment plan with special consideration for anchorage.

The optimum growth and development of the denture and alveolar bone and the forces of occlusion require the best possible functioning relationship of the teeth at an early age.

Treatment during the mixed dentition period has been neglected with the result that cases of malocclusion have been permitted to become so severe that it is impossible to obtain a well-balanced result.

Orthodontics is an applied science in which there must be principles which are applicable to each individual case. Many of the pitfalls are the results of looking for and following blindly rules of treatment based on mechanical concepts without consideration for biological reactions.

Mechanical forces applied to the teeth, regardless of age, will not influence the growth of the facial bones nor change their pattern; but position and relationship of the teeth can be changed and thereby guidance can be supplied for alveolar bone growth. This growth in turn will influence growth and development of facial musculature and produce a better functioning denture and a better facial esthetic result.

William F. Ford

MALOCCLUSION IN ANDROGEN-TREATED MONKEYS

Bert G. Anderson, C. M. Seipel and G. vanWagenen. Am. J. Orthodont. 39:187 March 1953.

Observations on occlusal deformities found in androgen-treated monkeys reveal an etiological basis similar to that associated with certain occlusal defects in human beings.

Two experimental animals (rhesus) received 3.75 mg. of testosterone propionate per kilogram intermuscularly twice a week: one from 7 months 6 days of age until 3 years 5 months 21 days of age; the other from 6 months 21 days of age until 3 years 5 months 11 days of age.

According to vanWagenen, "The bone age of seven year old male rhesus monkeys is comparable to that of the human of twenty years."

Roentgenograms of the skeletal structures of the head of one of the experimental animals show that this head is deformed. The jaws, particularly the maxillae, have failed to grow sufficiently to accommodate the complete denture. Consequently, there is marked crowding of the teeth with attendant failure of eruption of the third molars and an open bite, chiefly the result of the defective condition of the maxillae and of associated bones.

This condition of the maxillae is well known and attributed in the orthodontic literature to an "arrest" of bone growth. It seems in these instances to be rather the result of accelerated growth or maturity causing premature calcification of the basal skull cartilages.

Growth disturbance through systemic disease seems to have produced these malocclusions during development. A specific etiologic agent was demonstrated in the case of the experimental animals.

William F. Ford

SENSITIVITY TO COMPOUND G-4 ("DICHLOROPHENE") IN DENTIFRICES

A. A. Fischer and Louis Tobin. J.A.M.A. 151:998 March 21, 1953.

"G-4," dihydroxydichlordiphenylmethane, was studied by means of the patch test and was implicated as the exciting agent in nine cases of stomatitis, glossitis, cheilitis, perlèche or circumoral dermatitis. In 25 control cases no positive reaction was elicited by the patch test.

Eight of the patients were using an ammoniated toothpaste and one patient used a powder; both toothpaste and powder contained G-4. Withdrawal of the dentifrice led to prompt disappearance of signs and symptoms. When other ammoniated pastes were used, no side effects were observed.

The reaction to G-4 is one of allergic hypersensitivity. This agent is different from hexachlorophene (G-11) used in some soaps; a patient sensitive to the latter gave a negative response to patch testing with G-4.

Sholom Pearlman

THE SELF-POLYMERISING ACRYLIC RESIN AS A FILLING MATERIAL

G. H. Leatherman. Brit. D. J. 117:124 March 3, 1953.

The self-curing acrylic resin is here to stay. For the past two years, with certain exceptions, it has been used in place of silicate and porcelain. For the permanent jacket crown, however, porcelain is still the material of choice. While there is no material which embodies all requirements for both an anterior and a posterior filling material, certain of the self-curing acrylic resins come close to being adequate for anterior fillings.

Since the use of acrylic resins involves the management of a chemical reaction, it is important that the dentist have a clear idea of the nature of the ingredients and how they react when mixed and why they behave as they do.

The basis of most self-curing acrylic resins is the chemical action of a tertiary amine, called an activator, with a catalyst, usually benzoyl peroxide, to produce free radicals which act on the monomer and polymer of methyl methacrylate and produce polymerization. The material can be used: (1) in Class III, IV, V cavities where access, dryness and retention can be obtained, (2) as facings, emergency replacements of pontics, temporary jackets and cementing medium for inlays (not an easy technic).

The material should not be used in Class I and II cavities. Cavity preparation requires depth, bulk, no bevel and rounded full undercuts. Exposed dentinal tubules should be protected by an application for one minute of 50 per cent zinc chloride, which is then precipitated with 20 per cent potassium ferrocyanide; if necessary, the surface should be covered with a thin layer of cement.

Methods of insertion include: (1) bulk insertion retained with or without pressure, (2) brush-on technic without pressure, (3) lamination technic, and (4) inlay technic.

The conventional bulk insertion method is the most useful, but the brush-on method is a very valuable adjunct. It is well to wait 15 minutes after initial polymerization—evidenced by temperature rise—before minimum rough finishing is attempted. Twenty-four hours later final finishing is done.

Clinical records over a three year period were kept for 100 Kadon and 100 Sevriton fillings. The margins became more visible with time, but the surface stains only if the filling was badly polished. Pulp irritation occurred with both products; acute pulp involvement occurred in about three per cent of the cases. This rate has diminished in the past year because of the lining of more cavities of any depth.

The self-curing resin is a useful filling material which is much superior to the silicate filling; however, it is by no means perfect and is decidedly not foolproof.

Robert J. Nelsen

EVOLUTIONARY TRENDS IN ORTHODONTICS, PAST, PRESENT, AND FUTURE

Charles H. Tweed. Am. J. Orthodont. 39:81 Feb. 1953.

Twenty-five years of effort have proved that normal occlusion and the ultimate in facial balance are possible for few orthodontic patients. For the majority of patients, because of insurmountable limitations within the individual, orthodontists can strive only for as near an approach to normal in dental relationships and facial balance as conditions allow.

In order to gain balance and harmony of facial lines, it is necessary throughout treatment to place and retain the mandibular incisors within a + or −5 degree variation of the inclinations of the mandibular incisors. It is difficult to maintain this position without resorting to the removal of teeth. In some instances, this objective can be achieved by overexpansion of the dental arches, but too often at the expense of impacting both unerupted second and third molars. The usual aftermath to such overexpansion is relapse when retention is discontinued and lasting damage to investing tissues.

As a result of the experience gained during the practice analysis and the study of the facial esthetics in normal patients, the author developed his own concept of the normal. Nevertheless, he was unable to carry through his concept in treatment procedures and was forced into the decision to extract certain teeth, just at the time when he was beginning to feel for the first time that progress was being made in treatment problems and that patients, their parents, and the family dentists were approving the end results that were attained.

There have been great changes in orthodontic thinking because of the excellent research during the past 15 years. Not until clinical orthodontists direct their energies and technics along the lines dictated by modern proved research will there be less harsh mechanics and more applied biology in the art of clinical orthodontics.

William F. Ford

VITAL PULPOTOMY IN THE TREATMENT OF FRACTURED INCISORS

G. L. Slack. Brit. D. J. 94:32 Jan. 20, 1953.

By means of the vital pulpotomy technic, based on that outlined by Teuscher and Zander (1938), approximately 150 cases were treated with a high degree of success. In those cases where the indications for a pulpotomy were fully satisfied, 95 per cent success was reported.

The local anesthetic of choice was Xylocaine. General anesthesia was used in several cases without variation in the pulpotomy technic. The rubber dam was used whenever possible.

According to this technic, the pulp is amputated with a sharp spoon excavator. Hemorrhage is checked with sterile cotton pellets. The stump is covered with crystalline calcium hydroxide before clotting occurs. Paraffin wax is sealed over this with a warmed plastic instrument. Amalgam or, more recently, a self-polymerizing acrylic resin is used to fill the cavity flush with the fractured dentin. When roentgenograms show the formation of a dentin bridge, an acrylic crown form of suitable size is used as a mold; and the crown is restored with acrylic resin.

Several case histories with their roentgenograms are used to illustrate the technic.

W. W. Demeritt

THE SUPERIOR LABIAL FRENUM AND THE MIDLINE DIASTEMA AND THEIR RELATION TO GROWTH AND DEVELOPMENT OF THE ORAL STRUCTURES

Peter J. Ceremello. Am. J. Orthodont. 39:120 Feb. 1953.

A study of the literature, measurements and photographs of plaster casts of patients, and the results of surveys of orthodontists and oral surgeons help to determine the present clinical status of frenectomies. Topics of special interest are: the superior labial frenum as a normal part of the oral cavity, the abnormal frenum, reasons for the presence of the midline diastema, effects of the normal processes of growth and development on the superior labial frenum and the midline diastema, and the current status of frenectomies as reported by respondents in recent surveys.

Relatively early in orthodontic literature the superior labial frenum was listed as a cause of the midline diastema. Frenectomy was advised, and technics for its removal were described. According to a survey of the practices of orthodontists and oral surgeons, the number of frenectomies currently recommended by orthodontists is relatively small. Most of the respondents of the survey are treating the midline dental space orthodontically without frenectomy. The oral surgeon respondents indicate that the majority of frenectomies that they perform are referred to them by orthodontists and that the number of cases operated on now is fewer than five, ten and 20 years ago.

William F. Ford

TRIGEMINAL NEURALGIA. SURGICAL DECOMPRESSION OF THE GASSERIAN GANGLION AND THE POSTERIOR ROOT OF THE TRIGEMINAL NERVE IN TREATMENT

Robert Dean Woolsey and John L. K. Tsang. Missouri Med. 50:99 Feb. 1953.

One method of obtaining relief from trigeminal neuralgia is an operation involving decompression of the gasserian ganglion and the posterior root of the trigeminal nerve by the extradural approach.

This operation was performed on four patients, three women aged 24, 69 and 88 and one man aged 65, who had pain of from two to seven years' duration. In three cases three divisions of the nerve were involved and in one case only the maxillary and mandibular divisions. After the operation, relief from preoperative symptoms was immediate and complete in all cases with no recurrence of pain to date.

A simple decompression is preferred to nerve root section because of the postoperative complications which arise from the latter procedure. On occasions when it is necessary to cut the ophthalmic branch as well, the patient is exposed to the danger of neuroparalytic keratitis sometimes with permanent damage to the cornea and loss of the eye. In some cases, morbidity after retrogasserian neurotomy has been extreme, with numbness and burning and crawling sensations in the face, a condition for which there is no relief.

Therefore, until a final evaluation can be made of the decompression procedure, present results seem to indicate that it would be a great advantage to those patients currently being treated for trigeminal neuralgia to have a decompression operation tried first. If the symptoms recur, the nerve root can always be sectioned at a later date. This statement applies particularly to patients who are suffering from neuralgia of the ophthalmic branch.

James Springer

Deaths

Aber, Samuel, New York; Colorado College of Dental Surgery, 1903; died January 25; aged 75.

Abrahams, Oscar H., Minneapolis; College of Dentistry, University of Minnesota, 1918; died February 27; aged 56.

Baker, Franklin H., Brookline, Mass.; Chicago College of Dental Surgery, Loyola University, 1894; died February 2.

Black, Hiram H., Iowa City, Iowa; College of Dentistry, University of Iowa, 1911; died February 5.

Borowski, Oscar G., Detroit; Barnes Dental College, St. Louis, 1916; died February 12.

Brouillette, Laurence A., Wilder, Vt.; Dental School, Harvard University, 1916; died February 28; aged 59.

Campbell, Willis M., Edwards, N. Y.; Pennsylvania College of Dental Surgery, Philadelphia, 1897; died January 26.

Creighton, Dennis M., Mediapolis, Iowa; College of Dentistry, University of Iowa, 1905; died January 26; aged 73.

Davis, Chase O., Kansas City, Mo.; Western Dental College, Kansas City, 1902; died February 25; aged 82.

De Goenaga, Augusto H., Detroit; College of Dental Surgery, University of Michigan, 1908; died January 25; aged 64.

Elzey, George W., Jr., Seaford, Del.; Baltimore College of Dental Surgery, University of Maryland, 1919; died February 16; aged 56.

Haight, Lee E., Bellevue, Mich.; Chicago College of Dental Surgery, Loyola University, 1905; died February 28; aged 71.

Hall, John H., Bridgewater, Mass.; School of Dentistry, University of Pennsylvania, 1916; died February 5; aged 61.

Hancock, Wallace R., Center, Mo.; School of Dentistry, Washington University, St. Louis, 1908; died February 18; aged 66.

Harding, Firn R., Detroit; College of Dental Surgery, University of Michigan, 1913; died February 5; aged 64.

Hill, Josh C., Andalusia, Ala.; Southern Dental College, Atlanta, 1898; died January 7; aged 78.

Hinkley, C. B., Keokuk, Iowa; College of Dental Surgery, University of Michigan, 1893; died February 6; aged 90.

Hodge, Hugh W., Wichita, Kan.; Dental School, Northwestern University, 1902; died March 8; aged 75.

Huff, Elmer L., Springfield, Ill.; Kansas City-Western Dental College, 1924; died February 11; aged 59.

Humphreys, Charles A., West Hartford, Conn.; Baltimore College of Dental Surgery, 1899; died December 4; aged 74.

Hurst, James C., Center, Texas; School of Dentistry, Tulane University, 1911; died January 28; aged 68.

Irwin, John S., Hubbard, Ohio; School of Dentistry, University of Pittsburgh, 1925; died February 7; aged 53.

Irwin, Ralph M., Bradenton, Fla.; College of Dentistry, University of Iowa, 1908; died January 6; aged 70.

Johnson, Edward T., Danville, Ill.; Ohio College of Dental Surgery, University of Cincinnati, 1898; died December 14; aged 76.

Johnston, Leonard R., Arcadia, Calif.; College of Dentistry, University of Nebraska, 1923; died December 1.

Katz, Joseph H., Brooklyn; School of Dentistry, University of Pennsylvania, 1931; died February 12; aged 49.

Keehn, Charles G., Ligonier, Ind.; Chicago College of Dental Surgery, Loyola University, 1891; died February 4.

Kelley, Jay C., Geneva, Ohio; School of Dentistry, Western Reserve University, 1899; died February 24; aged 77.

Kelley, Philip P., Boston; Dental School, Tufts College, 1892; died January 23; aged 85.

Killett, Oscar L., West Plains, Mo.; died February 28.

Kingsley, Victor J., Boston; Dental School, Tufts College, 1914; died January 27; aged 69.

Koll, Edward F., St. Louis; School of Dentistry, St. Louis University, 1905; died February 7; aged 83.

Larkin, John A., Scranton, Pa.; died February 5.

Larsen, Lars A., Chicago; Chicago College of Dental Surgery, Loyola University, 1905; died December 2; aged 80.

Lasby, William F., Santa Ana, Calif.; College of Dentistry, University of Minnesota, 1903; died April 12; aged 77.

Law, David E., Howell, Mich.; College of Dental Surgery, University of Michigan, 1930; died December 4; aged 46.

Leonard, Alfred W., Holly, Colo.; Kansas City Dental College, 1905; died February 4; aged 76.

Levitz, David, Plainfield, N. J.; New York College of Dentistry, 1916; died February 17; aged 59.

Lewis, Martin J., Capay, Calif.; College of Dentistry, University of California, 1904; died February 27; aged 77.

Libby, Lewis S., Milford, Maine; Baltimore College of Dental Surgery, University of Maryland, 1913; died January 31; aged 62.

Long, Abram R., Seattle; Des Moines College of Dental Surgery, 1901; died February 11; aged 78.

Lubitz, Maurice W., New York; New York College of Dentistry, 1904; died December 20; aged 67.

Lubore, Jacob, Silver Spring, Md.; Baltimore College of Dental Surgery, University of Maryland, 1921; died February 10; aged 57.

Lunday, John H., Fargo, N. D.; College of Dentistry, University of Minnesota, 1933; died February 16; aged 51.

Lyons, Vaughn D., Pocatello, Idaho; Dental School, Northwestern University, 1923; died February 23; aged 58.

Mack, Walter G., Norristown, Pa.; Pittsburgh Dental College, Western University of Pennsylvania, 1906; died January 13; aged 70.

Madden, Willis R., Forest, Miss.; Southern Dental College, Atlanta, 1914; died December 26; aged 68.

Maggiolo, Harry, Brooklyn; College of Dental and Oral Surgery, New York, 1923; died March 21; aged 53.

Marquez, Vernon B., Silver Spring, Md.; Baltimore College of Dental Surgery, University of Maryland, 1935; died February 27; aged 43.

McCullagh, Frank R., Roxbury, Mass.; Dental School, Harvard University, 1902; died February 13; aged 78.

McDaniel, Donald J., Chicago; Dental School, Northwestern University, 1923; died February 14; aged 61

McDonald, Thomas N., Rochester, N. Y.; died February 15.

McGilligan, Stanley P., Urbana, Ill.; Dental School, Northwestern University, 1917; died March 8; aged 64.

McKay, N. Bruce, Dallas City, Ill.; Dental School, Northwestern University, 1908; died February 27; aged 75.

McLaurin, Lauch B., Natchez, Miss.; Atlanta Dental College, 1898; died February 23.

McManus, Charles E., Robbins, N. C.; Dental Department, University College of Medicine, Richmond, 1902; died January 16; aged 77.

Mead, Fred S., Mound City, Kan.; died March 3.

Meng, John C., Madison, Wis.; Dental School, Northwestern University, 1899; died March 18; aged 72.

Mershon, John V., Philadelphia; Pennsylvania College of Dental Surgery, Philadelphia, 1889; died February 18; aged 85.

Messier, Henry E., South Duxbury, Mass.; Dental School, Harvard University, 1938; died February 23; aged 39.

Messimer, Harold H., Tulsa, Okla.; School of Dentistry, University of Pennsylvania, 1900; died February 16.

Mietus, John A., Milwaukee; Chicago College of Dental Surgery, Loyola University, 1905; died February 26; aged 78.

Miller, Plinny D., Petoskey, Mich.; College of Dental Surgery, University of Michigan, 1908; died December 15; aged 70.

Misner, Elza L., Buffalo, Wyo.; College of Dentistry, Creighton University, 1937; died February 8; aged 42.

Morrison, Joseph S., Chester, Ill.; School of Dentistry, Washington University, St. Louis, 1894; died February 21; aged 79.

Nowak, Joseph J., Cleveland; School of Dentistry, Western Reserve University, 1919; died February 10; aged 56.

Orr, Roland R., American Falls, Idaho; Dental School, Marquette University, 1925; died February 10; aged 52.

Orum, Harold M., Washington, Pa.; School of Dentistry, University of Pittsburgh, 1930; died February 6; aged 46.

Overhuls, Oscar W., Delta, Colo.; Colorado College of Dental Surgery, 1918; died December 30; aged 68.

Parks, Charles A., Dayton, Ohio; School of Dentistry, Indiana University, 1927; died March 1; aged 47.

Parsal, Albert J., Benton Harbor, Mich.; College of Dental Surgery, University of Michigan, 1901; died February 22.

Pasch, Clarence I., St. Louis; School of Dentistry, St. Louis University, 1919; died February 27.

Paul, Earle E., Prescott, Ariz.; School of Dentistry, St. Louis University, 1924; died January 14.

Pendleton, John R., Shelbyville, Mo.; College of Dentistry, University of Tennessee, 1895; died January 2.

Perkins, Leroy E., Waymart, Pa.; School of Dentistry, University of Pennsylvania, 1898; died February 27; aged 76.

Peterson, Ernest W., Kansas City, Mo.; Western Dental College, Kansas City, 1898; died February 28; aged 81.

Peterson, Octave W., Harlan, Iowa; Dental School, Northwestern University, 1900; died January 22.

Phillips, Ralph F., Detroit; College of Dental Surgery, University of Michigan, 1912; died January 18; aged 65.

Pineo, Harold D., Hood River, Ore.; Baltimore College of Dental Surgery, 1905; died February 3; aged 70.

Plant, Herman D., Bessemer, Pa.; School of Dentistry, Temple University, 1929; died January 21; aged 46.

Ploche, Leon R., Chicago; College of Dentistry, University of Illinois, 1919; died February 2; aged 59.

Podruch, Louis L., Wausau, Wis.; Chicago College of Dental Surgery, Loyola University, 1916; died February 25; aged 61.

Pribil, Frank J., St. Joseph, Mo.; Kansas City Dental College, 1896; died March 2; aged 85.

Price, Courtland R., Saint Joe, Ind.; Indiana Dental College, 1899; died February 25; aged 89.

Rosenthal, John M., Fort Wayne, Ind.; College of Dental Surgery, University of Michigan, 1897; died February 19; aged 78.

Russ, Albert B., Biloxi, Miss.; Louisville College of Dentistry of Centre College, 1916; died February 14; aged 64.

Russell, Allan, New York; School of Dentistry, University of Pennsylvania, 1946; died January 10.

Ryerse, Oscar G., Buffalo; School of Dentistry, University of Buffalo, 1905; died February 27; aged 70.

Salmon, Hugh, Chicago; Chicago College of Dental Surgery, Loyola University, 1895; died January 10.

Salzman, Samuel I., Miami Beach, Fla.; Dental Department, Baltimore Medical College, 1907; died January 23; aged 68.

Satterfield, Herschel L., Charleston, W. Va.; Baltimore College of Dental Surgery, University of Maryland, 1912; died in March; aged 74.

Schaub, Arthur J., Decatur, Ill.; School of Dentistry, St. Louis, 1918; died February 9; aged 57.

Schroeder, Ernest R., Castro Valley, Calif.; College of Physicians and Surgeons, San Francisco, 1900; died February 18; aged 77.

Schwartzbek, Theodore C., Detroit; College of Dental Surgery, University of Michigan, 1910; died February 21; aged 67.

Scudder, Harrison V., Jersey City, N. J.; New York College of Dentistry, 1909; died February 5; aged 75.

Sharp, Harry C., Philadelphia; Philadelphia Dental College, 1901; died December 13; aged 73.

Shatswell, Harry K., Dedham, Mass.; Boston Dental College, 1891; died February 7; aged 89.

Shields, Roy C., South Bend, Ind.; Dental School, Northwestern University, 1924; died December 27; aged 53.

Siegel, Rudolph, Cincinnati; Ohio College of Dental Surgery, University of Cincinnati, 1898; died February 27; aged 91.

Simmons, Joe J., Dallas, Texas; Dental Department, Baylor University, 1924; died February 28; aged 51.

Skwiot, Phil A., Chicago; Chicago College of of Dental Surgery, Loyola University, 1932; died April 1; aged 43.

Smith, Clayton M., Elk River, Minn.; College of Dentistry, University of Minnesota, 1903; died February 14; aged 74.

Smith, Edward A., Chicago; Chicago College of Dental Surgery, Loyola Unicersity, 1945; died February 2; aged 33.

Stanley, Grant E., Bellingham, Wash.; died February 11; aged 73.

Steinsieck, Egbert C., Burlington, N. J.; School of Dentistry, University of Pennsylvania, 1914; died March 11; aged 61.

Summers, Charles E., Toledo, Ohio; Dental School, Marquette University, 1901; died March 1.

Sunderman, Walter, Charleston, Ill.; School of Dentistry, St. Louis University, 1911; died February 8; aged 61.

Taylor, Edwin S., Nashua, Iowa; College of Dentistry, University of Iowa, 1904; died March 11; aged 76.

Urbanek, Joseph, Berwyn, Ill.; Chicago College of Dental Surgery, Loyola University, 1914; died February 22; aged 50.

Walters, Charles E., Sioux Falls, S. D.; College of Dentistry, State University of Iowa, 1916; died February 21; aged 58.

Watson, Arthur S., Robbinsdale, Minn.; College of Dentistry, University of Minnesota, 1945; died January 21; aged 32.

Welch, Alanson U., Hopewell, N. J.; Medico-Chirurgical College of Philadelphia, 1900; died February 13; aged 78.

Wessels, Frederick R., Glenside, Pa.; Medico-Chirurgical College of Philadelphia, 1915; died January 2; aged 58.

Westfehling, Henry, New York; New York College of Dentistry, 1898; died February 25.

Wiseman, Fieldon W., Owensville, Mo.; Dental Department, Marion-Sims College of Medicine, St. Louis, 1899; died January 5.

Wood, J. Edgar, Bellingham, Wash.; School of Dentistry, North Pacific College of Oregon, 1924; died February 18.

Woodruff, Roy O., Bay City, Mich.; Department of Dental Surgery, Detroit College of Medicine, 1902; died February 12; aged 76.

Wrenn, H. Bradley, Seattle; School of Dentistry, Vanderbilt University, 1926; died January 27; aged 53.

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Announcements

MEETINGS OF THE AMERICAN DENTAL ASSOCIATION

Ninety-Fourth Annual Session	Sept. 28-Oct. 1, 1953	Cleveland
Ninety-Fifth Annual Session	Nov. 8-11, 1954	Miami
Ninety-Sixth Annual Session	Oct. 17-20, 1955	San Francisco

MEETINGS OF STATE SOCIETIES

State	Date	Place	Secretary	Address
Alabama	Apr. 25-27, 1954	Biloxi, Miss.	F. A. Finney, Jr.	1045 Forrest Ave., Gadsden
Alaska	July 12-16	Juneau	J. D. Smith	Box 134, Juneau
Arizona			E. M. Scott	17 E. Weldon Ave., Phoenix
Arkansas	Apr. 1954	Little Rock	D. M. Hamm	Box 89, Clarksville
California	Apr. 26-28, 1954	San Francisco	L. R. Ludwigsen	450 Sutter St., San Francisco
S. California	May 3-5, 1954	Los Angeles	J. P. Bowers	903 Crenshaw Blvd., Los Angeles
Colorado	Oct. 4-7	Colorado Springs	W. R. Humphrey	724 Republic Bldg., Denver
Connecticut			E. S. Arnold	37 Linnard Rd., W. Hartford
Delaware	Jan. 13, 1954	Wilmington	J. C. Baker	Mayfair Apts. Sec. C, 1300 Harrison St., Wilmington
District of Columbia	Mar. 14-17, 1954	Washington	Z. B. Lloyd	2207 R St., N.W., Washington
Florida	April 25-28, 1954	Daytona Beach	B. S. Carroll	706 Professional Bldg., Jacksonville
Georgia	Oct. 18-21	Atlanta	J. W. Yarbrough	Bibb Bldg., Macon
Hawaii			J. H. Dawe	810 N. Vineyard St., Honolulu 17
Idaho			J. F. Julian	206 Rogers Bldg., Idaho Falls
Illinois			P. W. Clopper	623 Jefferson Bldg., Peoria 2
Indiana	May 17-19, 1954	Indianapolis	E. E. Ewbank	Kingman
Iowa	May 3-5, 1954	Des Moines	H. I. Wilson	639 Insurance Exchange Bldg., Des Moines
Kansas	May 16-19, 1954	Wichita	F. A. Richmond	861 Brotherhood Bldg., Kansas City
Kentucky	Apr. 5-7, 1954	Louisville	A. B. Coxwell	1976 Douglass Blvd. Louisville
Louisiana	April 21-24, 1954	Baton Rouge	J. S. Bernhard	2515 LineAve., Shreveport
Maine			S. M. Gower	Box 27, Skowhegan
Maryland	May 2-5, 1954	Baltimore	A. S. Wheeler	609 Medical Arts Bldg., Baltimore
Massachusetts			H. E. Tingley	12 Bay State Road, Boston
Michigan	Apr. 25-28, 1954	Detroit	F. Wertheimer	Michigan Dept. of Health, Lansing
Minnesota	Feb. 22-24, 1954	St. Paul	C. V. E. Cassel	242 Lowry Medical Arts Bldg., St. Paul
Mississippi	June 3-8, 1954	Biloxi	B. A. Cohen	306 Plaza Bldg., Jackson
Missouri		St. Louis	E. D. Suggett	201 Merchants Bank Bldg., Jefferson City
Montana	May 6-8, 1954	Great Falls	E. G. Vedova	Roundup
Nebraska		Omaha	F. A. Pierson	1112 Federal Securities Bldg., Lincoln
Nevada	June 1954	Reno	O. M. Seifert	506 Humbolt St., Reno
New Hampshire			F. E. Williams	814 Elm. St., Manchester
New Jersey	May 4-6, 1954	Atlantic City	J. G. Carr	407 Cooper St., Camden
New Mexico			J. S. Eilar	Suite 7, Medical Arts Square, Albuquerque
New York	May 10-13, 1954	Buffalo	C. A. Wilkie	1 Hanson Place, Brooklyn
North Carolina		Pinehurst	R. D. Coffey	Kibler Bldg., Morganton
North Dakota	May 23-25, 1954	Bismarck	V. B. Keltgen	517 de Lendrecie Bldg., Fargo
Ohio	Nov. 8-11	Columbus	E. G. Jones	185 E. State St., Columbus
Oklahoma	Apr. 25-28, 1954	Oklahoma City	D. Robertson	434 N.W. 13th St., Oklahoma City
Oregon	Mar. 1-3, 1954	Portland	W. H. Hurley	7115 N. Chase Ave., Portland
Panama Canal Zone	Dec. 8	Balboa	C. F. Atkins	U. S. Army Hospital, Fort Clayton
Pennsylvania			M. D. Zimmerman	217 State St., Harrisburg
Puerto Rico			F. Ordoñez	1558 Ponce de León Ave., Stop 23, Santurce
Rhode Island	Jan. 17, 19, 20, 1954	Providence	N. G. Migliaccio	1467 Westminster St., Providence

State	Date	Place	Secretary	Address
South Carolina			J. R. Owings	7 Medical Court, Greenville
South Dakota	May 20-22, 1954	Sioux Falls	E. W. Elmen	Sioux Falls
Tennessee	May 10-12, 1954	Chattanooga	W. L. McCulley	Brown Bldg., Cleveland
Texas	April 25-29, 1954	Dallas	W. Ogle	3607 Gaston Ave., Dallas
Utah			K. L. Dedekind	914 Medical Arts Bldg., Salt Lake City
Vermont	May 16-18, 1954	Woodstock	W. J. Reardon	18 Madison St., Rutland
Virginia	April 12-14, 1954	Richmond	W. T. McAfee	705 Colonial National Bank Bldg., Roanoke
Washington			F. J. Dingler	1502 Medical-Dental Bldg., Seattle
West Virginia	July 19-22	White Sulphur Springs	A. B. Drake	506 West Virginia Bldg., Huntington 1
Wisconsin	Apr. 20-22, 1954	Milwaukee	R. A. Mason	964 N. 27th St., Milwaukee
Wyoming			T. J. Drew	State Office Bldg., Cheyenne

MEETINGS OF STATE BOARDS OF DENTAL EXAMINERS

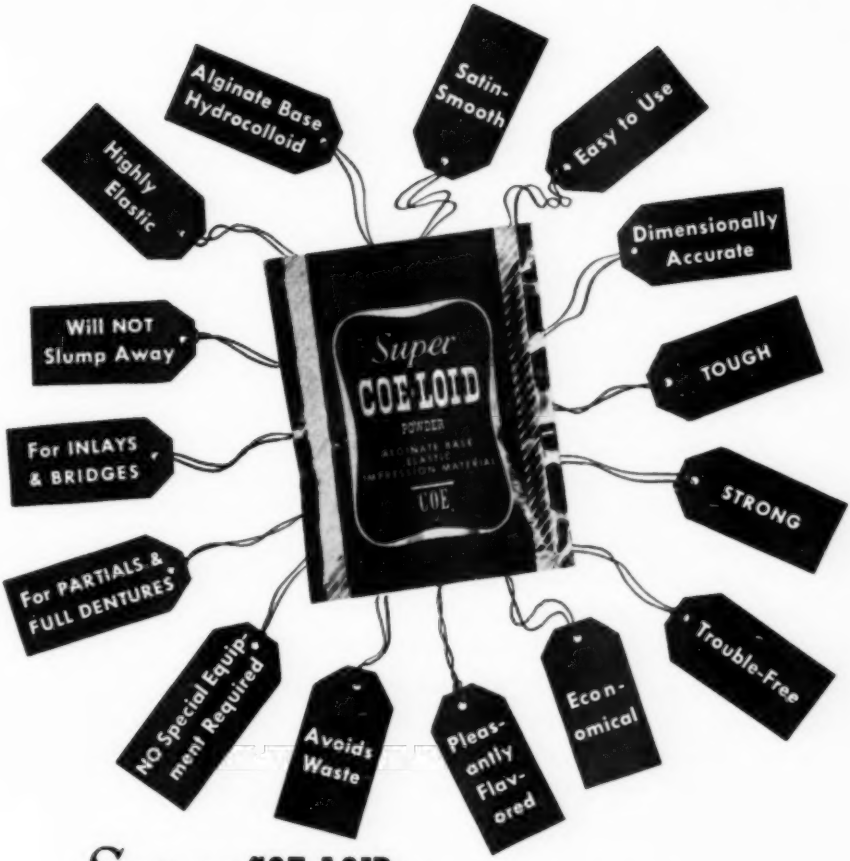
State	Date	Place	Secretary	Address
Alabama			N. E. Allen	Du Bose Bldg., Selma
Alaska	July 6-10	Fairbanks	J. H. Geyer	209 Goldstein Bldg., Juneau
Arizona	Aug. 10-15	Florence	R. K. Trueblood	107 East A Ave., Glendale
Arkansas			H. O. Weatherly	205 Halter Bldg., Conway
California	July 27	San Francisco	K. I. Nesbitt	507 Polk St., San Francisco 2
Colorado			C. K. Phillips	724 Republic Bldg., Denver 2
Connecticut	Nov.§	Bridgeport	C. G. Brooks	302 State St., New London
Delaware			P. K. Musselman	143 W. Maine St., Newark
District of Columbia			W. T. Birthright	1835 Eye St., N.W., Washington 6
Florida	July 6-14*†	Jacksonville	A. W. Kellner	P. O. Box 155, Hollywood
Georgia			S. H. Yarbrough	12 Medical Arts Bldg., Columbus
Hawaii	Aug. 31, Sept. 1, 5, 6*†	Honolulu	H. L. Houvener	427 Dillingham Bldg., Honolulu
Idaho			R. E. Blickenstaff	1023 Fourth St., S., Nampa
Illinois	Oct. 26-29	Chicago	W. A. McKee	503 Wood Bldg., Benton
Indiana	Nov. 16-19§	Indianapolis	C. A. Frech	504 Broadway, Gary
Iowa			H. M. Willits	719 Roshek Bldg., Dubuque
Kansas			G. L. Teall	Box 71, Hiawatha
Kentucky			R. I. Todd	Western Union Bldg., Richmond
Louisiana			R. C. Steib	833 Maison Blanche Bldg., New Orleans
Maine			R. A. Derbyshire	Box 387, Skowhegan
Maryland			H. Levin	3429 Park Heights Ave., Baltimore 15
Massachusetts			R. A. Barrette	Rm. 33 State House, Boston
Michigan			J. L. Champagne	3714 W. McNichols Road, Detroit 21
Minnesota			F. A. Larson	1632 Washington St., N.E., Minneapolis
Mississippi			J. C. Boswell	508 Lamar Life Bldg., Jackson
Missouri			R. R. Rhoades	414 Central Trust Bldg., Jefferson City
Montana	July 13-16	Helena	V. J. Quinn	301 Phoenix Bldg., Butte
Nebraska			H. E. Weber	1210 Federal Securities Bldg., Lincoln
Nevada			R. Whitehead	Suite 6, Masonic Temple, Reno
New Hampshire			D. J. Freese	4 Wall St., Concord
New Jersey	July 1-3*†	Trenton	W. A. Wilson	150 E. State St., Trenton 8
New Mexico			J. J. Clarke, Sr.	Artesia
New York	Oct. 6-7†‡ Oct. 6-9*‡ Oct. 12†‡ Oct. 12-13*‡		D. W. Beier	23 S. Pearl St., Albany 7
North Carolina			F. O. Alford	1109 Liberty Life Bldg., Charlotte 2
North Dakota	July 13-17	Fargo	A. B. Crabtree	Ellendale
Ohio			H. B. Smith	336 E. State St., Columbus
Oklahoma			R. P. Keidel	403 Surety Bldg., Muskogee
Oregon			F. L. Utter	506 Pioneer Trust Bldg., Salem
Pennsylvania			A. M. Stinson	Dept of Public Instruction, Box 911, Harrisburg
Puerto Rico	Sept.§	San Juan	L. C. Coll	Box 9156, Santurce

State	Date	Place	Secretary	Address
Rhode Island	Nov. 24, 25	Providence	F. M. Hackett	267 Academy Ave., Providence
South Carolina	July 1-3	Columbia	T. C. Sparks	1315 Pickens St., Columbia
South Dakota			H. T. Aker	Canton
Tennessee	Dec. 14‖	Memphis	F. S. Maxey	804 Bennie Dillon Bldg., Nashville 3
Texas			R. T. Weber	312 Capital National Bank Bldg., Austin
Utah			E. O. Thompson	915 Medical Arts Bldg., Salt Lake City
Vermont			F. A. Reid	Windsor
Virginia			J. M. Hughes	715 Medical Arts Bldg., Richmond 19
Washington			T. D. Schimke	662 Paulsen Medical and Dental Bldg., Spokane
West Virginia			C. A. Laughlin	613 Prunty Bldg., Clarksburg
Wisconsin			S. F. Donovan	Tomah
Wyoming			W. A. Hocker	212 O & S Bldg., Casper

•Dental examination.
†Dental hygiene examination.
‡Write to secretary of dental examining board for information on locations of examinations.
‖Approximate dates—verify with state dental examining board.

MEETINGS OF OTHER ORGANIZATIONS

Name	Date	Place	Secy. or Chm.	Address
American Academy of Implant Dentures	Sept. 27	Cleveland	P. S. Loechler Secy.	Dental Corps, Camp Gordon, Ga.
American Association of Dental Examiners	Sept. 25, 26	Cleveland	C. A. Bumstead Secy.	924 Stuart Bldg., Lincoln, Neb.
American Board of Dental Public Health	Sept. 24, 25	Cleveland	P. E. Blackerby, Jr. Secy.	250 Champion St., Battle Creek, Mich.
American Board of Oral Pathology	Sept. 27	Cleveland	P. E. Boyle Secy.	University of Pennsylvania, 4001 Spruce St., Philadelphia
American Board of Oral Surgery	Oct. 17-21	Houston	L. M. FitzGerald Secy.	718 Roshek Bldg., Dubuque, Iowa
American College of Dentists	Sept. 27	Cleveland	O. W. Brandhorst Secy.	4952 Maryland Ave., St. Louis
American Dental Assistants Association	Sept. 28-Oct. 1	Cleveland	M. L. Martin Exec. Secy.	410 First National Bank Bldg., LaPorte, Ind.
American Dental Society of Europe	Aug. 4-7	Bergen, Norway	F. D. Derrick Hon. Secy.	140, Park Lane, London W. 1, England
American Denture Society	Sept. 25, 26	Cleveland	A. L. Roberts Secy.	Aurora National Bank Bldg., Aurora, Ill.
American Society of Dentistry for Children	Sept. 25-27	Cleveland	C. F. Tuma Chm. Local Arrangements	13201 Miles Ave., Cleveland
Arpa Internationale, Thirteenth Congress	July 13-19	Geneva, Switzerland	J. N. Nally Secy. Gen., Com. on Organization	8, rue de Saussure, Geneva, Switzerland
Canadian Dental Association	Oct. 18-21	Montreal, Canada	D. W. Gullett Secy.	234 St. George St., Toronto, Ontario, Canada
Fédération Dentaire Internationale	July 26-Aug. 1	Oslo, Norway	G. H. Leatherman Hon. Secy.	35 Devonshire Place, London W. 1, England
Great Lakes Society of Orthodontists	Nov. 2-4	Grand Rapids, Mich.	C. R. Anderson Secy.	402 Loraine Bldg., Grand Rapids, Mich.
Greater New York Dental Meeting	Dec. 7-11	New York	M. Purdy Exec. Secy.	Hotel Statler, Room 106A, New York
Italian Congress of Stomatology, Twenty-eighth Congress	Oct. 13-17	Bari, Italy	P. D. Laforgia Gen. Secy.	Palazzo Ateneo, Bari, Italy
Mexican Dental Association, Second Congress	October 1953	Mexico City	R. M. Ruff Secy.	Reforma 510, Mexico City, Mexico
National Board of Dental Examiners	Dec. 7, 8		G. J. Casey Secy.	222 E. Superior St., Chicago 11
New England Dental Society	Oct. 21, 22	Boston	F. L. Finley, Jr. Secy.	43 Farmington Ave., Hartford, Conn.
Southern Society of Orthodontists	Nov. 1-4	Orlando, Fla.	M. D. Edwards Secy.	132 Adams Ave., Montgomery, Ala.
Stomatological Society of Greece, First Panhellenic Congress	Oct. 25-30	Athens, Greece	B. Stefanopoulos-Vrettos Pres.	71, Skoufa St., Athens, Greece



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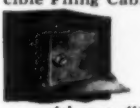

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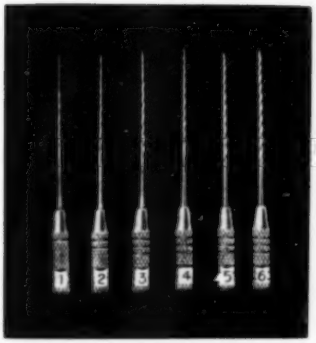

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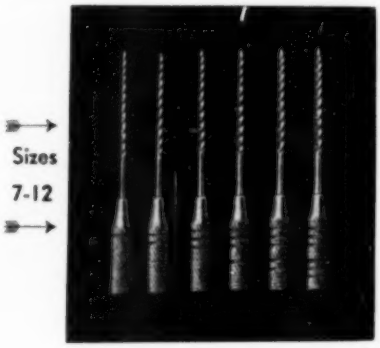

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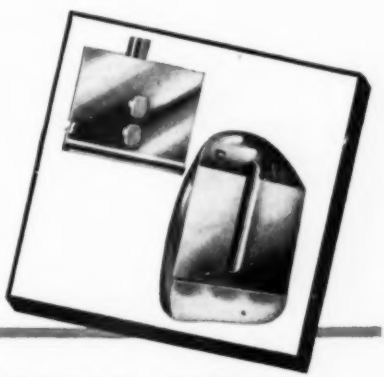

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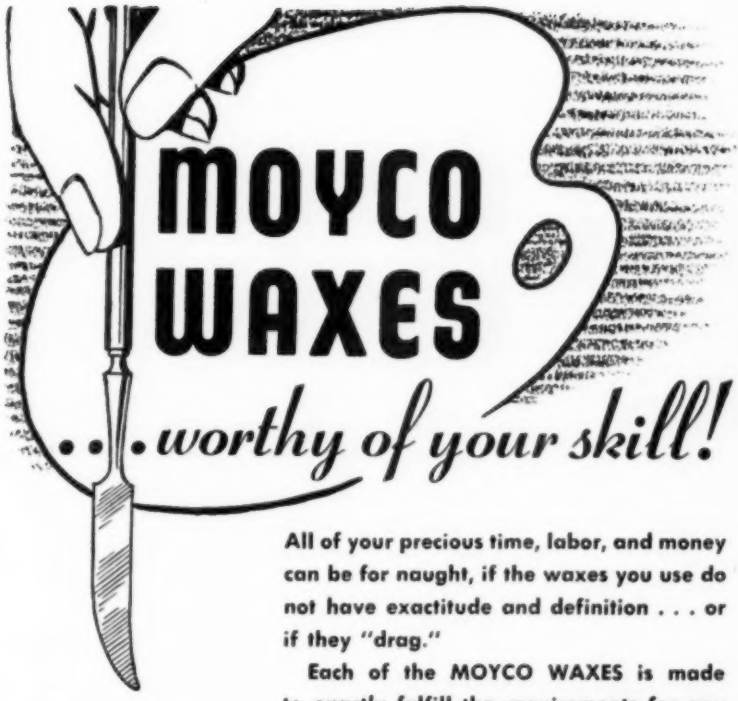

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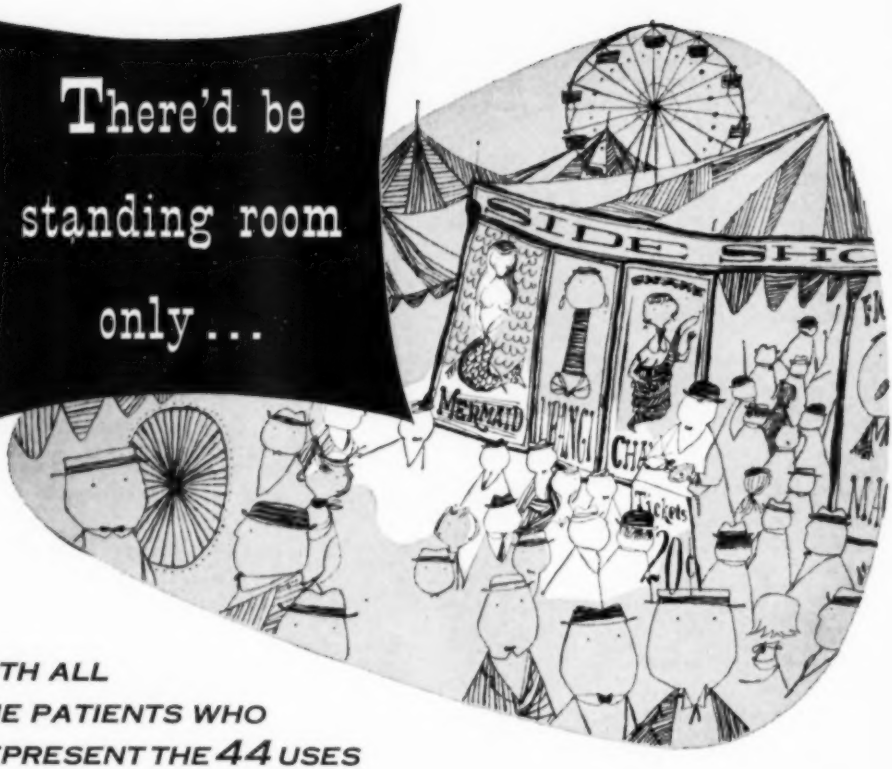

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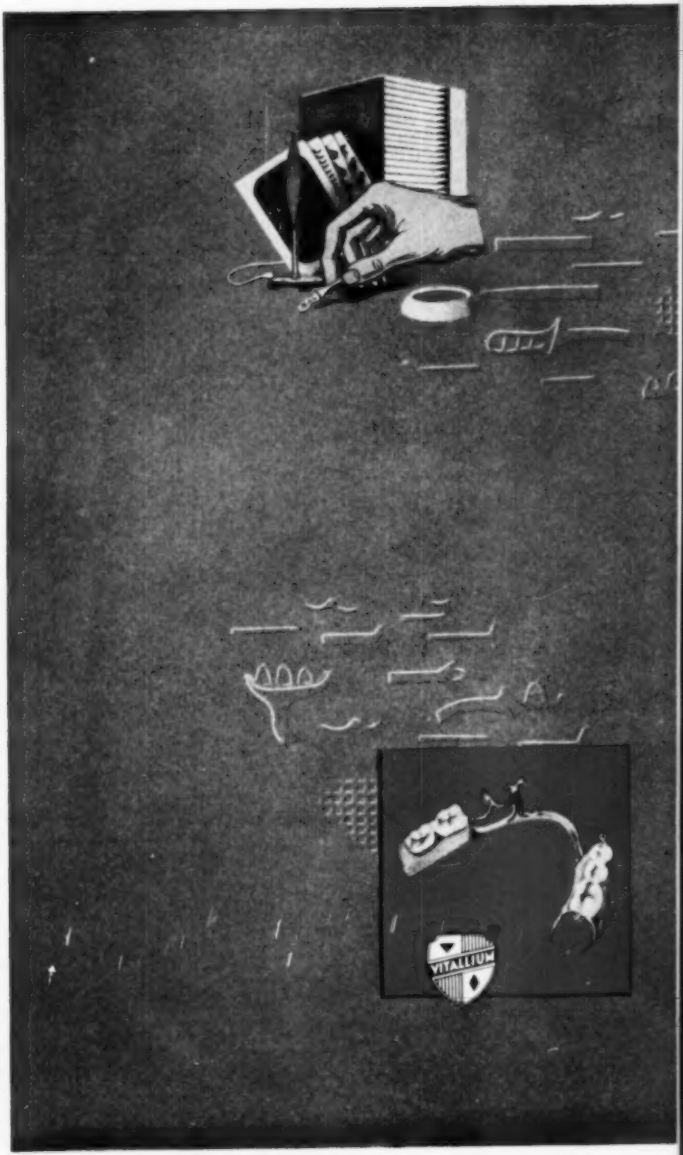
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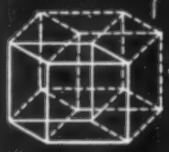

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†Bragdon, C.: A Primer of Higher Space, New York, Alfred A. Knopf, 1923, Plate 1.

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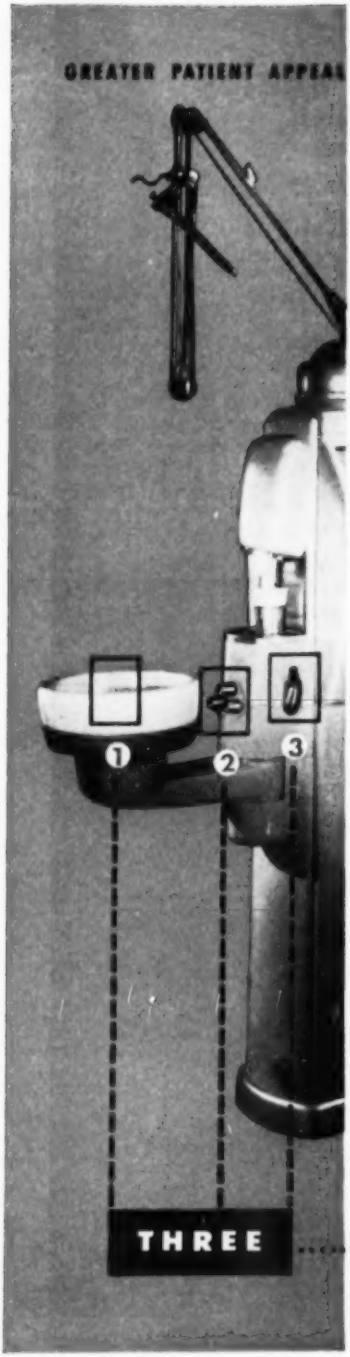

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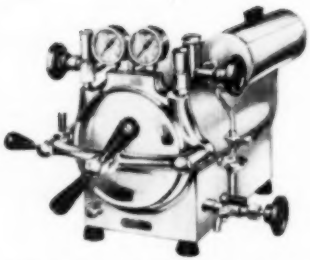

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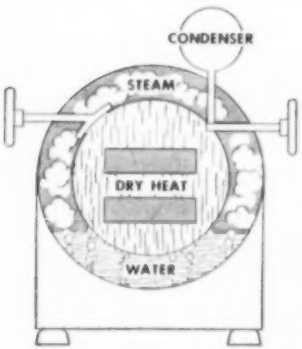

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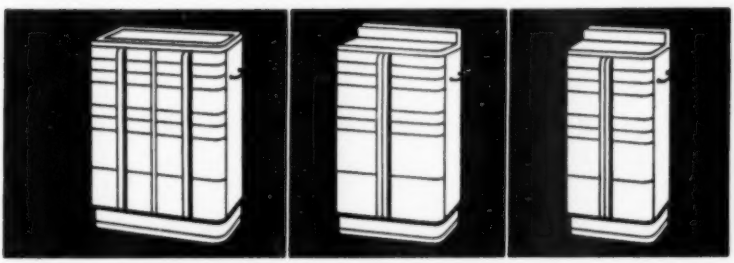

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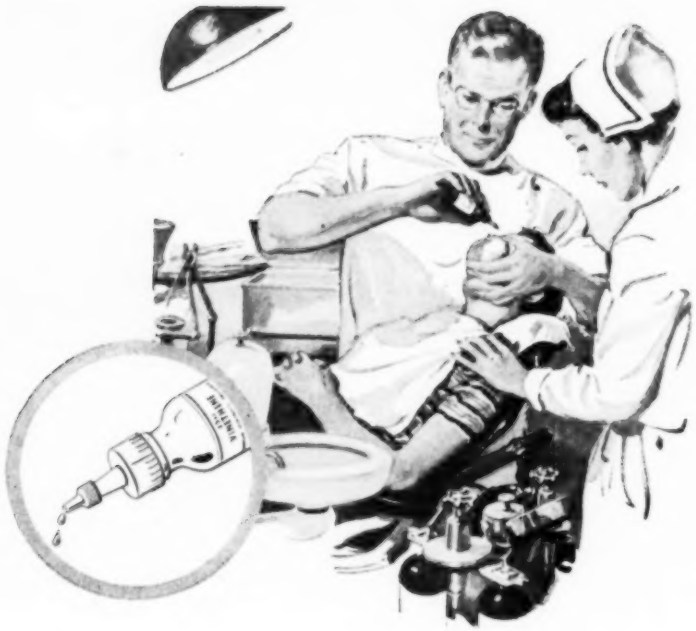

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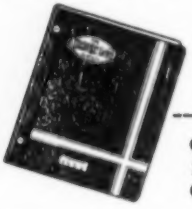

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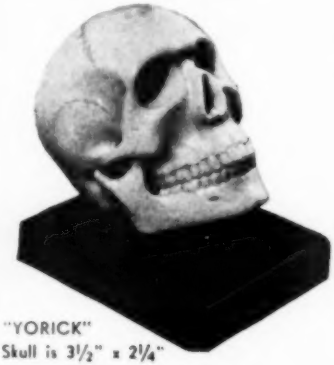

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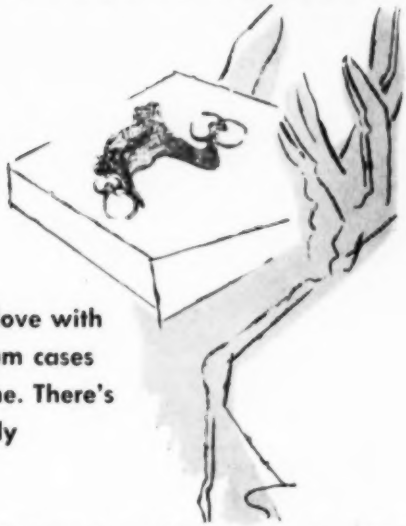
FITS... like a hand in a glove!



TICONIUM goes hand-in-glove with accuracy! Therefore, Ticonium cases save you valuable chair-time. There's no secret — it's a completely controlled technique.

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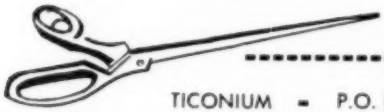


TICONIUM ▪ P.O. Box 350 ▪ Albany 1, New York

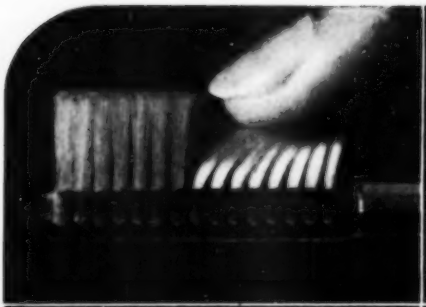
Gentlemen: Please send me a "Patient Education" folder for my waiting room.

Dr. .....

Address .....

City ..... Zone ..... State .....

Stop By Booths 401-403 For Your Copy of A New "Patient Education" Folder



ORAL B for Teeth

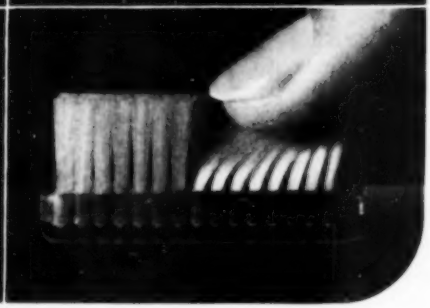
thorough cleansing

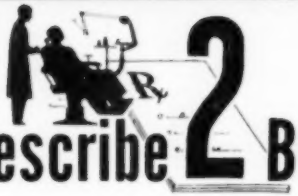
without abrasion

ORAL B for Gums

gentle-action for

sensitive tissues





Prescribe 2 Brushes in One!

Patients are quick to appreciate the value of this dual-purpose brush. Based on the recommendations of many professional men like yourself, the Oral B was designed for equally effective use on both teeth and gums. Over 2500 softer, smaller, flat-top bristles reach difficult inter-proximal spaces and provide a gentle-action for sensitive gingival tissues. In this way, the Oral B makes good oral hygiene practice easier and more effective. Try this *original* multitufted soft-bristle brush and enjoy a pleasant new experience. Write for detailed information.

Convenient prescription pads have been prepared for the many doctors and hygienists who wish to prescribe the Oral B. Send for your supply today.

First Introduced in February, 1949

Oral B Company

448 SOUTH MARKET STREET, SAN JOSE 13, CALIFORNIA

come to cleveland

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American

Dental

Association

94th Annual Session

September 28 — October 1

You'll enjoy the warm Fall days and the warm friendly welcome planned for you and your family here in Beautiful Ohio. A program rich and rewarding awaits you. Replenish your professional fund of knowledge in the scientific sections and clinics, educational and commercial exhibits. Refresh your outlook for the future. R-e-l-a-x and be entertained. Come to Cleveland on the shore of Lake Erie for the time of your life.

Make Your Reservations Now!

(Use official forms in A. D. A. Journal)

HOTELS IN CLEVELAND

Key No.	Hotel	Single	Double
1	Alcazar	$6.50-$10.00	$8.50-$12.00
2	Allerton	4.50- 7.00	6.50- 10.00
3	Auditorium	4.50- 8.00	7.00- 11.00
4	Belmont	3.25- 4.25	5.75- 7.50*
5	Bolton Square	3.50- 5.00	6.50- 8.00
6	Carter	4.50- 8.00	7.00- 12.50
7	Cleveland	5.00- 10.00	8.50- 15.00
8	Commodore	6.50- 10.00	8.50- 12.00
9	Fenway Hall	6.00- 6.50	8.50- 10.00
10	Hollenden	4.50- 8.00	7.00- 16.00
11	Lake Shore	5.00- 8.00	9.00- up
12	New Amsterdam	3.00- 4.00	5.50- 7.00
13	Olmsted	$4.25- $8.00	$7.00-$10.00
14	Park Lane Villa	5.50- 6.00	7.00- 8.00*
15	Quad Hall	3.00- 6.00	6.00- 10.00
16	St. Regis	3.50- 5.00	5.00- 9.00
17	Sovereign	5.00- 7.00	7.00- 9.00
18	Statler	5.50- 9.50	8.50- 16.00
19	Stockbridge	4.00- up	6.00- up *
20	Tudor Arms	5.00- up	8.00- 11.00
21	Wade Park Manor	6.00- 7.00	9.00- 11.00
22	Westlake	6.00	8.00- 9.00

*Suites not available
Rates for suites available on request

Hotel reservation application

94th Annual Session
American Dental Association
Sept. 28—Oct. 1, 1953
Cleveland, Ohio

INSTRUCTIONS: Reservations for hotel accommodations may be secured by completing this application and mailing it to: A.D.A. Housing Bureau, 511 Terminal Tower, Cleveland 13, Ohio.

Be sure to indicate your arrival time in Cleveland. Reservations will be held only until 6 p.m. of the day you indicate when you will arrive in Cleveland. Failure to notify the hotel of any last minute change in your arrival time may result in cancellation of the reservation.

Names of all persons who intend to occupy the accommodations must be listed on the application.

List four choices of hotels. Confirmation will be sent to the applicant indicating which hotel has accepted the reservation.

Write the A.D.A. Housing Bureau in Cleveland if you wish to cancel the reservation.

A.D.A. Housing Bureau • 511 Terminal Tower, Cleveland 13, Ohio

(Please print or type) A.D.A.

Applicant:

Name_____

_____
(Street address) (City) (Zone) (State)

Arrival in Cleveland_____ a.m. p.m. Leaving_____

Accommodations:

Hotel_____ (First choice) Hotel_____ (Third choice)

Hotel_____ (Second choice) Hotel_____ (Fourth choice)

☐ Single occupancy, rate to range from $____ to $____ per day.

☐ Double occupancy, double bed, rate to range from $____ to $____ per day. } 2 names must be listed below

☐ Double occupancy, twin beds, rate to range from $____ to $____ per day. }

☐ Suite of ____ rooms, including parlor, rate to range from $____ to $____ per day.

Occupants: (use an extra page for listing additional names if necessary)

Room will be occupied by:

_____
(Name) (Address) (City) (State)

_____
(Name) (Address) (City) (State)

DEPTH WITHOUT DANGER

WITHIN a few seconds the modern skyscraper's elevators descend a thousand feet . . . carrying hundreds of thousands of men and women safely—day after day, year in and year out . . . *Depth without Danger!*

Monocaine 2ME, the Safety First Local Anesthetic, too, carries hundreds of thousands of patients into the blessed realm of deep, profound, safe anesthesia . . . week in and week out . . . free from the tissue trauma and side effects of "strong" local anesthetics . . . *Depth without Danger!*

Accepted COUNCIL ON DENTAL THERAPEUTICS AMERICAN DENTAL ASSOCIATION

MONOCAINE 2ME

THE *Safety First* LOCAL ANESTHETIC

Monocaine 2ME was developed especially for those cases in which anesthesia is difficult to obtain. It is particularly effective for jacket crown construction, pulp extirpation, preparation of bridge abutments, etc. It produces anesthesia as deep and profound as 4% procaine, but its toxicity is considerably less. Its action is gentle; free from untoward reactions. Tissues return to normal quickly. Use 2ME—the local anesthetic solution that's always safe as well as potent!

NOVOCOL CHEMICAL MFG. CO., Inc.
2911-23 ATLANTIC AVE., BROOKLYN 7, N. Y.

Positive Adaptation Long-Lasting Restorations with the Kadon "Brush On" Technic

Combining Kadon powder and liquid *inside the cavity* by means of a brush is the newest, most successful technic for applying this durable filling material. Because the material literally flows into place in successive layers, maximum adaptation is obtained . . . without matrix or clamps, and with a welcome saving in chair time. Kadon's high heat-rise assures quick setting of each "Brush On" layer. The result is a truly homogeneous filling which combines all the good qualities that have made Kadon restorations an outstanding success in five years of clinical experience!

Caulk KADON

Reg. U.S. Pat. Off.

NOW . . .
KADON IS COLORFAST!

Regardless of age or exposure to light, fillings made of new Colorfast KADON powders maintain their lifelike color-match . . . won't "yellow" or "gray." Yet there has been no sacrifice in setting speed or other properties! Unopened bottles of old KADON powder will be exchanged for new Colorfast powders without charge.

"Look ma--- no

He may be in over his depth at any moment, unless he holds that grabrail securely. New denture wearers, too, often feel on the verge of precipitation into embarrassing situations, unless they have extra help during the difficult period of adaptation.

Wernet's Powder can provide an extra measure of reassurance, to help make the course of adjustment smooth and successful. Not only does it improve retention and stability of the denture under awkward manipulation, but it provides a soft, resilient cushion to reduce initial discomforts, and encourage patience and perseverance.

Particularly in the presence of anatomical handicap or psychological hazard, dentists find Wernet's Powder invaluable in helping the patient to gain full proficiency with fewer difficulties.

WERNET DENTAL MFG. CO., INC., JERSEY CITY 2, N. J.

Wernet's Powder

Speeds the Mastery of the Denture

WERNET DENTAL LORE

JULY 1953

Ambrose Paré (1510-1590) made many interesting and important contributions to the art of dental practice, not the least of which was his design and use of the first obturators known to dentistry.

• • •

An English physician, William Hunter, is one of those to whom credit is due for spurring dentistry to its modern scientific level. In 1910, in an address at McGill University, he brilliantly criticized the often crude dental restorative work of the period; as a result of which, the common use of bacteriological and X-ray examinations was markedly stimulated.

• • •

Even the most enthusiastic proponents of toothbrushing today would blush at the spirited claims made for the toothbrush or siwak by Mohammed when he wrote: "It makes the teeth white, clarifies the understanding, makes the breath fragrant, extinguishes the gall, dries up the phlegm, strengthens the lower part of the gums, and the gums around the teeth, makes the glands clear, sharpens the power of vision, opens the valves and whets the appetite."

• • •

Authentic "who-dun-it": After the murder of the family of Nicholas, Czar of Russia, in the 1918 revolution, an impostor claimed to be Anastasia, the Czar's youngest daughter, miraculously saved from the slaughter. However, the Russian dentist Kostritsky exposed her through a check of his plaster casts of the jaws of the royal children, showing that the teeth in the lower jaw had a totally different alignment from those of the pretender.

• • •

India plays an important continuing role in dental history: In the 5th century B.C. a theory of tooth decay titled "Legend of the Worms" was carved by Indians in clay tablets; and in the 20th century A.D., India's gum trees yield Karaya Gum, the world's finest water-soluble gum, used as a basic ingredient in Wernet's Powder.

FREE PROFESSIONAL SAMPLES

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WERNET DENTAL MFG. CO., INC., Jersey City 2, N. J.

Please send me professional samples of Wernet's Powder.

Dr. _____
PLEASE PRINT

Address _____

City _____ Zone ____ State _____

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"HIGH FIDELITY"

VACUUM-FIRED PORCELAIN JACKETS

BRIDGES • VENEERS • INLAYS

at the 1953 MEETING of the AMERICAN DENTAL ASSOCIATION

Cleveland — September 28 — October 1.

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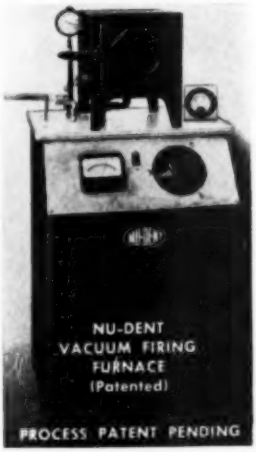
"The Most Revolutionary Advance in Dental Ceramics in 50 Years"

Nu-Dent "High Fidelity" Vacuum-Fired Porcelain Restorations are—

- The ONLY "Vacuum-Fired" Porcelain Restorations fired in a High Vacuum (700 mm. or 27.56 in. mercury).
- The ONLY "Vacuum-Fired" Porcelain on which independent testing laboratory tests have been published. Nu-Dent Vacuum-Fired Porcelain is markedly Stronger, Denser, Harder than conventionally fired porcelain. Photostat of Test Report sent on request.
- The ONLY "Vacuum-Fired" Porcelain Restorations which are Guaranteed to Match the most Subtle Shades in Any Shade Guide, BECAUSE—
- Nu-Dent Vacuum-Fired Porcelain Restorations are carved in a Special Porcelain, developed by Nu-Dent for Vacuum Firing. It is the only porcelain used for hand-carved porcelain work in which accurate shade control can be guaranteed under vacuum firing.



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to BELIEVE the Difference

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INDEX TO ADVERTISEMENTS

July 1953

Abbott Laboratories A-28
American Dental Association.... A-6, A-22, A-53, A-54, A-55
American Cabinet Co. A-39
American Consolidated Dental Co. A-7
Ash, Sons & Co., Inc., Claudius..... A-3
Astra Pharmaceutical Products, Inc. A-32, A-33
Austenal Laboratories, Inc. A-30, A-31

Baker & Co., Inc. A-48
Bristol-Myers Co. A-10

Caulk Co., L. D. A-43, A-57
Church & Dwight Co., Inc. A-4
Classified Advertising A-26, A-27
Coe Laboratories, Inc. A-17
Coles Corporation A-24
Columbia Dentoform Corp. A-46
Columbus Dental Mfg. Co. A-5, A-23
Colwell Publishing Co. A-46
Cook-Waite Laboratories, Inc. A-2
Corega Chemical Co. A-41
Crescent Dental Mfg. Co. A-47

Densco, Inc. A-9
Dental Gold Institute, Inc. A-16
Dental Perfection Co. A-37
Dentists' Supply Co. of N. Y., The.. 2nd Cover, 4th Cover

Eastman Kodak Co. A-13

Gesner, Inc., M. A. A-8

Handling Equipment Mfg. Corp. A-22
Handy & Harman A-1

Invincible Metal Furniture Co. A-19

Jelenko & Co., J. F. A-19
Johnson & Johnson A-29

Kerr Manufacturing Co. A-14

Lauer Metal Shop A-27
Lea & Febiger A-40
Lederle Laboratories A-15
Linen Supply Association of America.... A-50

Medical Protective Co., The A-22
Merck & Co., Inc. A-44
Mizzy, Inc. A-21
Moyer Co., Inc., The J. Bird A-25

Ney Co., The J. M. A-11
Novocol Chemical Mfg. Co., Inc. A-56
Nu-Dent Porcelain Studio, Inc. A-60

Oral B Co. A-52

Pelton & Crane Co., The A-38
Physicians Casualty & Health Assn..... A-40
Professional Printing Co. A-24
Pro-phy-lac-tic Brush Co. A-42

Reliance Dental Mfg. Co. A-45
Rinn X-Ray Products, Inc. A-20
Ritter Co., Inc. A-36
Rower Dental Mfg. Co. A-19

Staples Press, Inc A-19
Sunkist Growers, Inc. A-49

Ticonium A-51
Toledo Dental Products Co., The A-18

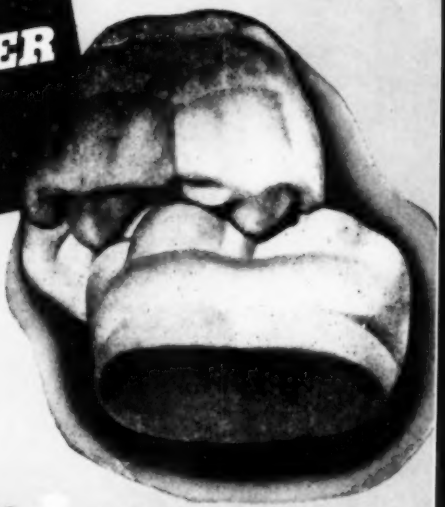
Union Broach Co., Inc. A-21

Warren Laboratories A-12
Wernet Dental Mfg. Co., Inc. A-58, A-59
White Dental Mfg. Co., The S. S... A-34, A-35

PILKINGTON-TURNER

VACUUM-FIRED 30°

Posteriors



OFFER A NEW POTENTIAL IN YOUR FULL AND PARTIAL DENTURE PRACTICE

A NEW SERIES OF BICUSPIDS AND MOLARS DESIGNED TO FUNCTION IN ACCORDANCE WITH THE ANATOMICAL REQUIREMENTS OF MANDIBULAR MOVEMENTS. OCCLUSAL PLANES ARE MACHINE CUT FOR GREATER EFFICIENCY WITH A COMPLETE NEW CLEARANCE SYSTEM WHICH ELIMINATES INTERFERENCE.

Scientifically designed to meet the anatomical requirements of the mandibular movements of the greatest majority of patients.

In performance and function they provide maximum masticating efficiency in the artificial dentition.

Available in a range of moulds and sizes for all average cases.

Vacuum fired in eight popular shades of the Trubyte Bioform Natural Tooth Color System.

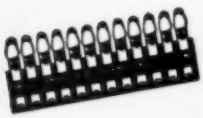
The first posterior design which incorporates the anatomy and esthetics of the natural buccal slope of the bicuspids.

Natural bucco-lingual widths which offer a new flexibility of use in partial denture work.

Engineered occlusal surfaces, narrow occlusal contacts, adequate clearance ways and ample food table assure greater comfort for the patient.

A new scientific design which provides a new degree of simplicity in set up, teeth go to place more easily, corrective milling and grinding is reduced to a minimum.

Vacuum fired by an exclusive, patented process which produces denser, more vital porcelain than ever before made available in posterior teeth.



The first full blending of shades ever available in posterior teeth, assured by the controlled placement of enamel and body porcelains — a new degree of accuracy in color selection and matching to anteriors.

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